



Commonwealth of Massachusetts Department of Fish & Game

Mary B. Griffin, Commissioner

DIVISION of ECOLOGICAL RESTORATION

Tim Purinton, Director

Ebb & Flow

An electronic newsletter from the Massachusetts Division of Ecological Restoration

Ebb&Flow #14

December, 2012

An electronic newsletter from the Massachusetts Division of Ecological Restoration (DER)

<http://www.mass.gov/dfwele/der>

Greetings, restoration friends and colleagues:

The big buzz in the Massachusetts water world is the recent unveiling of the final **Sustainable Water Management Initiative (SWMI) Framework** and the outlining of steps toward implementation. The Mass. Executive Office of Energy and Environmental Affairs (EEA) has set up a website (<http://www.mass.gov/eea/swm>) that details the new Framework, and documents the extensive work to create a more up-to-date, scientifically-based process for balancing human and ecological water needs. Huge credit goes to our colleagues in EEA, the Departments of Fish and Game, Environmental Protection, Conservation and Recreation and Division of Fisheries and Wildlife for working overtime to make this new Framework a reality.

DER has long been involved in documenting flow in Massachusetts' rivers and streams through our **River Instream FLOW Stewards (RIFLS)** work, and we continue to be a valuable resource by assisting our fellow agencies and municipalities with the development of sound approaches to water management. An example of this work is highlighted in our feature article, describing how our flow monitoring is being integrated into a regional, long-term climate change monitoring program.

Continuing our groundbreaking work to improve river health through barrier removal, DER staff is teaming up with MassDOT, Baystate Roads, the Massachusetts Rivers Alliance, the Berkshire Environmental Action Team (BEAT) and others to host **three Stream Crossings workshops next March** (see details below). This will be an opportunity to advance fish and wildlife-friendly standards in bridge and culvert design.

Finally, this has been a red letter year for on-the-ground restoration. Multiple dams have been removed and over one hundred acres of wetlands have been restored. Details of some of these projects are in this edition of **Ebb&Flow**, and all will be revealed in our 2012 Annual Report, due out soon.

See you on the water –

Sincerely,

Tim Purinton, Director



Hunt Durey, Acting Deputy Director

“Improving Stream Crossing Design: Flood Resilient, Fish Friendly” Workshops to take place in several Western Massachusetts locations next March

Recent severe storms have wreaked havoc on western Massachusetts roads, costing millions in damage and disrupting life in affected communities for months. Road closures from culvert failures lead to increased costs due to limited emergency access, additional commute times, and lost business revenue. Many crossings fail, in some cases repetitively, due to the inability to pass high flows and materials stirred up by the river. These crossings require ongoing maintenance and repairs when they become plugged with debris. That’s the bad news.

The good news is that crossings designed with rivers in mind – and meeting the [Massachusetts Stream Crossing Standards](#) – can safely pass huge volumes of water, sediment, and debris stirred up by high flows, and maintain safe passage for emergency personnel and residents. While initial installation costs for an open arch or bridge span may exceed traditional culvert approaches, long-term costs are significantly reduced as the road crossing survives larger precipitation events and needs less maintenance. Stream Crossing Standards alone do not satisfy the need for proper engineering and design, however. When sizing a crossing for high flows, communities must account for potential effects of climate change on future storm characteristics and changes in stream hydrology due to development.

To address these and related issues, several [Improving Stream Crossing Design: Flood Resilient, Fish Friendly workshops](#) have been organized for next March. The dates and locations for these workshops are:

Wednesday, March 13, 2013 at Westfield State University, Westfield;

Tuesday, March 19, 2013 at Berkshire Community College, Pittsfield; and

Tuesday, March 26, 2013 at the Olver Transit Center, Greenfield.

All workshops will run from 9:00 AM – 3:00 PM and include lunch.

These workshops, intended for municipal public works staff, municipal staff and volunteers, and engineering consultants, will focus on making stream crossings safer and more resilient in the face of future storms. Expert presenters will provide best practices and case studies on replacing road/stream crossings – covering site assessment, engineering standards, permitting, funding and installation. Click [here](#) for more info on these upcoming workshops and [here](#) for more background info and supporting materials on this topic.

Registration and more info about the **Improving Stream Crossing Design: Flood Resilient, Fish Friendly** workshops will eventually be available via the [BayState Roads Program](#) website. In the meantime, you might want to take a look at recently-updated (June 2012) versions of the [Massachusetts Stream Crossing Handbook](#) and [Poster](#). These documents are designed to inform and educate local decision makers and conservationists about the importance of properly designed stream crossings, and include several case studies and technical resources. Hard copies of these two documents are also available; contact Carrie Banks at carrie.banks@state.ma.us or (413) 579-3015 for more info. Additional related info includes [Design of Bridges and Culverts for Wildlife Passage at Freshwater Streams](#), put out in December, 2010 by MassDOT Environmental Services, and [Critical Linkages: Assessing Connectivity Restoration Potential for Culvert Replacement and Dam Removal in Massachusetts](#), a PowerPoint presentation made at the [2012 National Conference on Engineering and Ecohydrology for Fish Passage](#), held at UMass/Amherst this past June.



Feature Article:

DER's streamflow program joins regional partners to detect aquatic responses to climate change

By Laila Parker

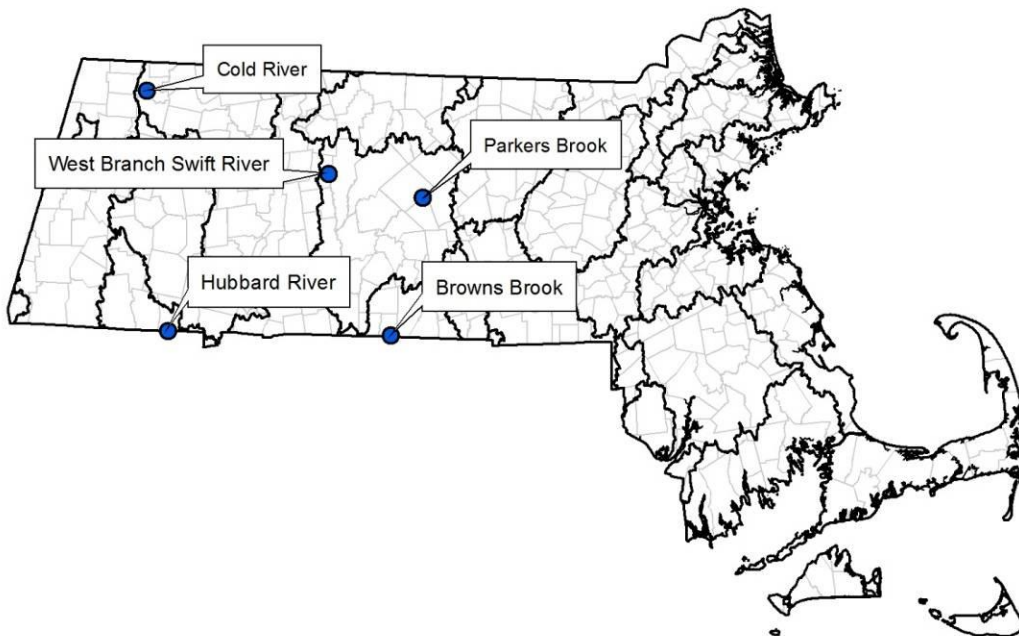
DER's streamflow program has recently teamed up with partners in Massachusetts and six other states to monitor a network of reference stream sites in the Northeast. The overarching goal of the effort is to establish a baseline of hydrology, temperature, and macroinvertebrate data in forested catchments that may be used to detect and document potential ecosystem responses to climate change.

Where we're monitoring

We are focusing on sites where small changes could be most easily detected. The sites are on smaller streams, rather than large rivers, as smaller waterways tend to be particularly vulnerable to the effects of climate change. In addition, sites are located in relatively unimpacted areas, in order to better assure that any trends we detect are due to climate change and not other anthropogenic factors. Project partners used GIS and local knowledge to select 30 sites across Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York meeting the following criteria:

- Reference status (at least 85% forest cover and minimal impervious land cover, no influence of dams or discharges, no known water quality issues, and located in protected lands).
- Moderate gradient streams.
- Previous biotic sampling and presence of sensitive aquatic organisms.
- Moderate to high vulnerability to climate change, based on an analysis using three exposure categories: 1. low flow events and warming temperatures, 2. shift in the timing of winter/spring runoff, and 3. peak flow events.

The five Massachusetts sites, shown in the map below, are on the Cold River in Florida, the Hubbard River in Granville, the West Branch of the Swift River in Shutesbury, Browns Brook in Holland, and Parkers Brook in Oakham.



What we're looking for

Network partners are currently monitoring three key indicators of climate change. Impacts from climate change may take many years to detect, so we hope to maintain this network for the foreseeable future.

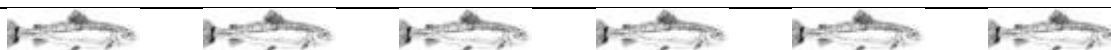
- **Seasonal stream flow** patterns, including the timing, duration, and volume of flows, may be altered by warmer conditions across the Northeast. Specifically, it is anticipated that we will likely see more high-flow events in winter, earlier peak flows in spring, and extended low-flow periods in summer.
- **Air and water temperature** will be directly impacted by climate change and can give us information on ecological attributes such as temperature-driven spawning cues and growing season length. Measuring air and water temperature together helps to tease out the influence of climate change on streams.
- **Stream macroinvertebrate** abundance and composition help to explain the ecosystem response to climate and other stressors.

DER's role is in monitoring stream flow and stream temperature at three sites in Massachusetts, through our River Instream FLOW Stewards (RIFLS) program. We are partnering with Allison Roy at the USGS - Massachusetts Cooperative Fish and Wildlife Research Unit, Mike Cole of the Deerfield River Watershed Association, and Bob Nuzzo at DEP's Division of Watershed Management, as pictured from left to right at the Parkers Brook site. The foundation for this effort was developed in cooperation between regional state bioassessment scientists, EPA's Global Change Impacts and Adaptation Group, staff at the consulting firm Tetra Tech, and other partners.



How you can get involved

Many of the regional network sites are co-located with a USGS stream gage; at the remaining sites, partners will need to install equipment to measure stream stage (water surface elevation). In Massachusetts, DER's RIFLS program has installed staff gages and temperature and water level sensors and loggers at the three sites (Cold River, Browns Brook, and Parkers Brook) that are not co-located with USGS gages. One such gaging station (see photo at left) is installed at Browns Brook (also known as May Brook) in Holland. We are developing rating curves at these sites so as to generate flow data from the stage data. **We are also looking to enlist volunteers to read the staff gages**, in order to corroborate the sensor readings, alert us to any changes that may affect the data, and observe any changes in these streams. If you are interested in reading one of these three gages, or know someone who might be, please contact Laila Parker at (617) 626-1533 or laila.parker@state.ma.us.



Division of Ecological Restoration News and Project Updates

River Restoration Projects Update

By Alex Hackman

DER's River Restoration Program has been busy implementing dam removal projects with a variety of local, state, federal, and NGO partners. The total number of dam removals accomplished in 2012 will be **nine**: Wellingsley Brook Restoration (3), Thunder Brook (1), Mill River (1), Boston Brook (1), Amethyst Brook (1), and Thousand Acre Brook (2). DER is thrilled to see a dam removal movement starting to sweep across Massachusetts, as the multiple benefits (such as: improving the ecological conditions of our streams and rivers; decommissioning failing infrastructure; eliminating public safety issues and owner liability; and reducing flooding hazards) are making sense to more and more people.

While DER staff are frequently in the field overseeing this and related work, we got together and took a few minutes to provide ***Ebb&Flow*** readers with quick updates on several projects that are recently completed or nearing completion. Additional updates will be reported on in the next ***Ebb&Flow*** as well as in **DER's 2012 Annual Report** once we all have a chance to warm up in the office after a long and busy field season.

Bartlett Rod Shop Company Dam Removal-Amethyst Brook, Pelham



View (from the former Bartlett Rod Shop) of the dam and the drained impoundment behind it.



View (from the same spot) of the mostly-deconstructed dam



View (from the same spot) of the bank regrading and restoration following dam removal.

Amethyst Brook now flows freely once again for the first time in almost 200 years past this former fly rod manufacturing site in the Town of Pelham. After completing permitting and fundraising in early 2012, the project team hired SumCo Eco-Contracting (Salem MA) to remove the 25' high structure. On October 17, a groundbreaking celebration was hosted by the dam owner (HRD Press – more about that below). Over the following three weeks, the old dam was removed, thousands of cubic yards of sediment were re-positioned to allow the stream to flow through the area, and historical preservation actions were completed, including stabilization of portions of the abutments and construction of a new viewing platform made of old dam capstones. Scientists from the US Forest Service and Dartmouth College – as well as local high school students – are using the stream as a backyard laboratory to collect data that describes changes post-dam removal. Stantec Consulting Services provided engineering design, permitting support, and construction phase services under contract to DER.

The dam removal celebration on October 17 was well-attended and well-covered by the media. Here are links to various news stories covering the event: [Work Begins To Remove Dam In Pelham Massachusetts](#) (WAMC Public Radio); [Work begins to remove Amethyst Brook Dam in Pelham + photos](#) (Springfield Republican); [Dam Removal in Pelham, MA to Open 9 Miles to Migratory Fish Habitat](#) (New England Public Radio) and [At long last, Amethyst Brook dam comes down in West Pelham](#) (Amherst Bulletin). [Click [here](#) to read the EEA press release, [here](#) for the U.S. Fish and Wildlife Service's photos of the event, and [here](#) to view the DER Flickr page for this event.]

DER salutes the large team of funders that helped to make this possible, including the Massachusetts Environmental Trust, NOAA Restoration Center, US Fish and Wildlife Service, American Rivers, Mass DEP, FishAmerica Foundation, and Clean Water Action – thank you for your support! The Town of Pelham Historical and Conservation Commissions and the Town of Amherst Conservation and Development Department provided substantial input and assistance as well. We'll provide future updates, including the scheduling of another celebration and planting event in the spring of 2013. In the meantime: this is a beautiful coldwater stream; pack your fly rod and [go take a look](#).

Lower Wellingsley Brook Restoration Project



“Pre-removal” view (looking downstream) of one of the concrete dam structures placed across the channel of Wellingsley Brook



“Post-removal” view of Wellingsley Brook from the same location.

Restoration work was completed this fall on the lower section of this coastal stream in the Town of Plymouth. DER, NOAA, and others supported the Town of Plymouth in designing, permitting, and implementing the removal of three small dams and the re-construction of a section of stream channel of Wellingsley Brook, near its discharge into Plymouth Harbor. Dandel Construction (Rockland MA) was the contractor and Inter-Fluve, Inc. was the project design engineer. The project is expected to benefit local brook trout, American eels, and other aquatic and riverine species. Click [here](#) and [here](#) to read two detailed news stories on this project, and [here](#) to read the EEA press release.

Phillipston Reservoir Dam Removals



View of the primary dam and the dewatered former Phillipston Reservoir behind it. The 1200-foot-long structure is slated for breaching soon, along with removal of another dam and other restoration work benefitting Thousand Acre Brook.

The Town of Athol, working with DER, is about to begin the removal of two dams in the headwaters of [Thousand Acre Brook](#) in Phillipston. Kaszowski Brothers (Charlton MA) was selected as the contractor; Stantec Consulting Services is providing engineering oversight services under contract to DER. The project is supported by the [Massachusetts Environmental Trust](#), and is expected to help promote a restored wetland area around the former reservoir. A 300' breach will be constructed through the primary dam (1,200' total length), a [second smaller dam](#) (about 8' tall) will be completely removed, and roadway fill and a perched culvert removed from a small tributary.

Mill River Restoration Project Update

By Beth Lambert



View of the newly-restored, sinuous channel of the Mill River, now freely-flowing through the site of the former impoundment above the recently-removed Hopewell Mills Dam in Taunton.

The **Mill River Restoration Project** in Taunton is an ambitious effort to restore an urban river corridor and return river herring to more than 30 miles of high quality habitat. Ultimately, the Mill River Restoration Partners will remove three dams and construct a fish ladder at a fourth dam. (Click [here](#) to see [The Nature Conservancy's web page on the Mill River Restoration Project](#), featuring a [video narrated by Alison Bowden of The Nature](#)

[Conservancy and filmed on location.](#))

The Project kicked off this past summer with the [removal of Hopewell Mills Dam](#), also referred to as the State Hospital Dam due to its close proximity to Taunton State Hospital. [Click [here](#) to read an article about and photos of this dam removal in [Ebb&Flow #13](#), [here](#) to read American Rivers' press release, and [here](#) to download a nice outreach brochure on this dam removal project and what it was intended to accomplish, prepared by Mass. Audubon.]

Removing the Hopewell Mills Dam involved excavating contaminated sediments, constructing a new stream channel through the former impoundment, and restoring the formerly submerged floodplain with native trees and shrubs. Project partners took a brief break from this work to host a public event at the site on October 19 to celebrate the dam removal and the ongoing river restoration project. The [event was attended by Congressman Barney Frank \(see photo\) and many other elected and municipal officials](#), river restoration advocates and [practitioners](#), and neighborhood residents. [Click [here](#) to read a posting about this event in the Mill River Restoration Blog, [here](#) to read NOAA's press release, [here](#) to access media coverage and view photos of the event posted on project partner [Southeastern Regional Planning & Economic Development District](#) (SRPEDD)'s web page, and [here](#) and [here](#) for additional news about and photos of this event.] Following the event, excavation of the former impoundment and the re-creation of a free-flowing river channel through the site continued, and habitat restoration will be completed in December.



Congressman Barney Frank speaking at the Hopewell Mills Dam removal celebration on October 19.



[Nick Nelson](#) of project partner Inter-Fluve leading a tour of the dewatered project site in the Mill River floodplain as part of the October 19 event celebrating the removal of the Hopewell Mills Dam.

In the meantime: the Mass. Department of Transportation (MassDOT) incorporated and constructed a fish ladder

this fall as part of a [larger project](#) to rebuild the Bay Street Bridge and Morey's Bridge Dam, the most upstream of the original four dams on the Mill River (now only three, thanks to the removal of the Hopewell Mills Dam). The next dam downstream, the Whittenton Dam, will be removed this winter. And this just in: DER and Reed & Barton announced a partnership to remove West Britannia Dam, the final structure slated for removal. DER is excited to work with this historic Taunton company for the benefit of the Mill River and the community.

Thunder Brook Restoration Project Update

By Nick Wildman



View of the new, "open-bottom", arched culvert over Thunder Brook, that enhances fish passage.



View (looking upstream) of a newly-restored, free-flowing segment of Thunder Brook above the recently-removed dam.

Last month, operators from SumCo Eco Contracting put the finishing touches on the Thunder Brook Restoration project in Cheshire. The project is the result of over three years of effort by the Town of Cheshire and DER to restore natural functions of this coldwater stream by removing a relict dam and replacing a failing culvert. These two barriers were major impairments to an otherwise thriving stream system, draining the southeastern slopes of Mount Greylock to the Hoosic River.

In August, the Cheshire Highway Department undertook the dam removal with guidance from Stantec Consulting

Services, the project engineer. In October, the culvert downstream was replaced with an open-bottom span that will allow for natural movement of fish, wildlife, water, and sediment. (Click [here](#) to access several entertaining time-lapse videos documenting this restoration work.) Monitoring on the stream will continue by the Hoosic River Watershed Association (HooRWA) and the Mass. College of Liberal Arts (MCLA).

Last but not least: the **public is invited** to an event celebrating this ecological restoration project (brief remarks followed by a guided site tour) on **Friday, December 14**, from 10:30 AM to 12:00 Noon. The event will start out at the [Cheshire Town Hall, 80 Church Street in Cheshire](#).



Resources and Grants

Grant, Prize, Fellowship, Contest, Award, Fundraising, etc. Opportunities

(presented in rough chronological order by application/nomination/entry deadline)

[Nominations are being sought](#) (until **December 14, 2012**) for the [Environmental Law Institute's 2013 National Wetlands Awards](#). Awards will be given for individuals in the following six categories: **Conservation and Restoration; Education and Outreach; Landowner Stewardship; Science Research; State, Tribal, and Local Program Development; and Wetlands Community Leader**. Recipients are chosen by a selection committee of wetland experts from across the country and honored at a ceremony on Capitol Hill each May - **American Wetlands Month**. Click [here](#) for more info and [here](#) to download the nomination form.

The American Hiking Society (AHS)'s [National Trails Fund](#) is the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. Many of our favorite trails need major repairs due to an enormous backlog of badly needed maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools, and materials to protect America's cherished hiking trails. Groups interested in applying for a 2013 National Trails Fund grant should read the [2013 National Trails Fund Guidelines](#). N.B.: Applicants must be a current member of AHS's [Alliance of Hiking Organizations](#) to be eligible (to find out more about the Alliance, click [here](#) or contact Peter Olsen at POlsen@AmericanHiking.org). Questions about the National Trails Fund should be directed to John Michels at 301-565-6704 ext. 208 or email info@AmericanHiking.org. The application is posted [here](#); the submission **deadline** is **December 15, 2012**. Grants will be announced and awarded in the spring of 2013.

The [Fiskars Corporation's 2013 Project Orange Thumb](#) provides cash, tools, materials, and other support to help communities reach their goals for neighborhood beautification, community collaboration, and healthy, sustainable food sources. The program is open to 501(c)(3) organizations. Eleven recipients will be selected from the pool of eligible applicants. Ten will receive \$5,000 in cash and tools, and one applicant will receive a complete garden makeover. The application **deadline** is **December 15, 2012**; click [here](#) for more info.

The [BoatUS Foundation for Boating Safety and Clean Water's Grassroots Grants Program](#) annually awards funds to nonprofit organizations, boating clubs, and student groups in the United States for projects that utilize innovative approaches to education about safe and clean boating. Projects the Foundation is most interested in funding will be unique (topic, methods, or delivery mechanism); include extensive outreach to boaters; use technology to educate boaters, including social media and the Web; have a widespread reach (not just a handful of boaters); include hands-on work with the boating community; and have a way to measure the success of the program. Applicants may request any amount up to \$10,000. After review by foundation staff, the top-ranked applications will be posted for public voting on the BoatUS Foundation Web site. Grant applicants will have several weeks to promote their project and encourage others to vote. Click [here](#) to for complete program guidelines, an eligibility questionnaire, and to access the online application; the **deadline** to apply is **December 17, 2012**.

Would you like to increase your climate science knowledge? Would you like to join a community of educators interested in projects that make a difference in your local area? If so, you are invited to [apply to join the Class of 2013 for NOAA's Climate Stewards Education Project](#) (CSEP), in which formal and informal educators are provided with sustained professional development, collaborative tools, and support to build a climate-literate public that is actively engaged in climate stewardship. Successful applicants are eligible for:

- Mini-grant funding to develop and implement a climate stewardship action plan
- Travel stipends to attend and present at key professional development conferences.
- Special CSEP contests with monetary and educational resource prizes.

The **deadline** to apply is **December 17**; click [here](#) to apply or [here](#) for more info.

What motivates you to give to the causes you care about during this time of year? [Guidestar's 2012 Giving Season Give Back Contest](#) encourages you to create a 15-second (or shorter) video of what giving back means to you, [post it on YouTube](#), and share the URL. The Contest winner will be able to give the nonprofit organization of his or her choosing 30 minutes of consulting time with [Guidestar's CEO, Jacob Harold](#), and 15 hard copies of [More Money for More Good](#). Click [here](#) to enter or for more info; the contest entry **deadline** is **December 18**. [Recent articles posted to [Guidestar](#) include: [Who will Lead your Fundraising Campaign?](#); [Five Capital Campaign Secrets](#); [How to Respond when Donors Resist Meeting You](#); [Make Fundraising all about the Donor](#); [Why Long Fundraising Letters Outpull Shorter Ones](#); [12 Questions You Can Ask Donors Once They Say Yes](#); [Answers to Thorny Questions about Working with Boards](#); and [Is Social Media Right for Your Organization?](#).]

[Outdoor Nation](#) and the [Recreational Boating and Fishing Foundation](#) have teamed up to offer The [Take Me Fishing Awards](#), which support pioneering projects and initiatives that are youth-developed that result in increased fishing participation. Projects should reinforce the idea that recreational fishing is one of the first and most important ways in which young Americans are introduced to the outdoors. Applications are being accepted from **individuals between the ages of 18 and 28 and 501 (c)(3) non-profits**, each of which can be awarded up to \$2,500 for requests that are youth-driven and create connections between young people and aquatic environments through recreational fishing opportunities. The top 10 ideas will be awarded, funding along with technical support and guidance from Outdoor Nation. The application **deadline** is **December 21, 2012**; click [here](#) for more info.

The Massachusetts office of the Natural Resources Conservation Service (NRCS) recently announced that **applications for four federal conservation programs** will be ranked for possible funding on **December 21, 2012**. While Massachusetts farmers and forest land owners can apply for these programs anytime throughout the year, the NRCS will review and rank all complete applications for the current round of funding on December 21. This announcement applies to the [Environmental Quality Incentives Program](#) (EQIP), the [Wildlife Habitat Incentive Program](#) (WHIP), [Agricultural Management Assistance](#) (AMA) and the [Conservation Stewardship Program](#) (CSP) programs, where farmers and forest land owners are eligible to receive financial and technical help to protect soil, water and other natural resources. Click [here](#) for info on the NRCS's related "[Working Lands for Wildlife](#)" initiative.

The [Source Water Collaborative](#), a group composed of 23 organizations working together to protect sources of drinking water, is looking to **provide support to three collaborative efforts in 2013 to protect drinking water sources by gaining the support of key agricultural and/or Clean Water Act authorities to implement conservation practices and other effective approaches**. Interested parties should submit an Expression of Interest by **12:00 Noon on Friday, December 21, 2012**. This sponsorship would be a 10-month commitment and would include planning support. Please download this [document](#) for more details about this pilot program, including criteria, instructions for submitting your response and an FAQ.

American Rivers is currently seeking submissions for its [2012 National River Cleanup Photo Contest](#). The organization is interested in seeing good "action" shots of river cleanups, whether they be of your group members caked in river mud, photos of the trash you collected, "before and after" cleanup shots, or any other photos that best represent your [National River Cleanup](#)® success out on the river. The **deadline** to submit entries is

December 31, 2012; click [here](#) for more info.

The [President's Youth Environmental Awards \(PEYA\) Program](#) promotes awareness of our nation's natural resources and encourages positive community involvement. Since 1971, the President of the United States has joined with EPA to recognize young people across the U.S. for protecting our nation's air, water, land, and ecology. One outstanding project from each EPA region is selected for national recognition. Projects are developed by young individuals, school classes (K-12), summer camps, and youth organizations to promote environmental stewardship. Winning projects in the past have covered a wide range of subject areas, including environmental science projects, construction of nature preserves, major tree planting programs, videos, skits, and newsletters that focused on environmental issues. The application **deadline** for the regional PEYA awards is **December 31, 2012** applications for [PEYA certificates](#) are accepted on a year-round basis. Click [here](#) or contact Kristen Conroy at (617) 918-1069 or conroy.kristen@epa.gov at the EPA's Region One/New England office for more info.

[Switzer Fellowships](#) provide one year of financial academic support, as well as long-term career and professional development support, for **graduate students** in New England and California. The application **deadline** for the **2013 Switzer Fellowship Program** is **January 10, 2013**. Prospective applicants will want to review the [Fellowship program guidelines](#) and the [Call for Applications](#). The [Switzer Leadership Grant Program](#) provides up to \$40,000 in funding to **selected organizations that work with a Switzer Fellow** on a project aimed at improving environmental quality. Leadership Grants are designed to advance the professional development of Fellows and to increase the capacity of organizations to address a critical environmental issue. The next **deadline** for leadership grants is **February 1** – click [here](#) for more info. Any questions regarding either of these opportunities can be directed to Erin Lloyd, Program Officer, at erin@switzernetwork.org or (207) 338-5654.

The annual [Volvo Environment Prize](#) is awarded for “outstanding innovations or scientific discoveries which in broad terms fall within the environmental field”. The prize is awarded by an independent foundation, and past Laureates represent all fields of environmental and sustainability studies and initiatives. The Volvo Environment Prize Foundation invites universities, research institutes, scientists and engineers as well as other individuals and organizations to submit nominations. The nomination **deadline** is **January 13, 2013**; click [here](#) to read the nomination guidelines and to submit a nomination.

The National Endowment for the Arts (NEA)'s [Our Town Grants Program](#) provides grants in the \$25,000 - \$200,000 range to support **creative placemaking projects that contribute toward the livability of communities** and help transform them into lively, beautiful, and sustainable places with the arts at their core. The next application **deadline** is **January 14, 2013**; Click [here](#) to apply or for more info. [See the [Project for Public Spaces website](#) for related info.]

Applications are now being accepted for the 2013 [Presidential Innovation Award for Environmental Educators](#), which recognizes outstanding kindergarten through grade 12 teachers who employ innovative approaches to environmental education and use the environment as a context for learning for their students. Up to two teachers from each of EPA's 10 regions, from different states, will be selected to receive this award. The **deadline** to apply is **January 31, 2013**; click [here](#) to apply or for more info.

TD Bank and the Arbor Day Foundation have announced the launch of [TD Green Streets](#), a new grant program that will offer ten \$20,000 grants in support of **innovative urban forestry initiatives in low- to moderate-income neighborhoods**. Funding will support the purchase of trees, tree planting and maintenance, and educational activities. Up to 50 percent of the proposed funding can be used to purchase new trees. Municipalities are encouraged to apply in partnership with community partners such as nonprofit organizations, schools, businesses, etc. The application **deadline** is **January 31, 2013**; click [here](#) to apply or for more info.

The [Bonnell Cove Foundation](#) makes grants for projects that promote safety at sea and for **environmental protection that improves the quality of the marine environment**, such as the control of coastal water pollution and coastal land conservation. Click [here](#) for the application guidelines. Proposals should be submitted to: Ms. Mary

Gunther Drew, Secretary, Bonnell Cove Foundation, 47 Fair Street, Guilford, CT 06437. Proposal submission **deadlines** are **February 1** for the March board meeting and September 1 for the October meeting.

The [Mass. Department of Conservation and Recreation](#)'s [FY13 Recreational Trails Grants](#) will provide grants ranging from \$2,000 to \$50,000 for a variety of trail protection, construction, and stewardship projects throughout Massachusetts. Click [here](#) or contact Paul Jahnige [paul.jahnige@state.ma.us, (413) 586-8706 ext. 20] for more info. The application **deadline** for this program is **February 1, 2013**.

[Outdoor Nation](#)'s [Paddle Nation Project Grants Program](#) is currently accepting applications from **individuals between the ages of 18 and 28 or 501(c)(3) non-profit organizations** who are interested in **connecting young Americans with their waterways through recreational paddling**. Paddle Nation Project Grants support pioneering projects and initiatives that are youth-developed and that result in increased paddling participation. Projects should reinforce the idea that recreational paddling is one of the most accessible and impactful ways in which young Americans are introduced to the outdoors. The application **deadline** is **February 1, 2013**. Click [here](#) for more info, [here](#) to download the Paddle Nation Project Grant Information Document, and [here](#) to read about the winners of the 2012 Paddle nation Awards.

The [Environmental Leadership Program](#) (ELP) recently announced an [opportunity to apply for Fellowships](#) in its regional programs, including the [New England Regional Network](#). The ELP Fellowships are intended for people wishing to take their environmental career to the next level and/or to find a better balance in work and in life, while building a network with some of the most innovative people in the country. ELP is one of the only organizations in the country bringing together environmental and social change leaders from academia, business, government and the non-profit sector. The **deadline** to apply is **February 1, 2013**; click [here](#) to apply and for more info.

The mission of the [Corporation for National and Community Service](#) (CNCS) is to improve lives, strengthen communities, and foster civic participation through service and volunteering. CNCS's [AmeriCorps](#) program recently issued a [Notice of Federal Funding Opportunity for FY13](#) for six focus areas identified by the [Serve America Act](#), one of which is [Environmental Stewardship](#). CNCS will fund programs that can demonstrate community impact and solve community problems using an evidence-based or evidence-informed approach. The application **deadline** is **February 6, 2013**; click [here](#), write to americorpsgrants@cns.gov or call (202) 606-7508 for more info, or click [here](#) to register for a **January 10** conference call on the AmeriCorps grant application selection criteria and related info.

The [Five Star/Urban Waters Restoration Program](#) seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships for **wetland, forest, riparian and coastal habitat restoration with a particular focus on urban waters and watersheds**. The program provides grants on a competitive basis to support community-based wetland, riparian, and coastal habitat restoration projects that build diverse partnerships and foster local natural resource stewardship through education, outreach and training activities. The National Association of Counties, the [National Fish and Wildlife Foundation](#) (NFWF), and the Wildlife Habitat Council (WHC), in cooperation with the U.S. EPA, the U.S. Forest Service, NOAA, Southern Company, FedEx and others, are pleased to solicit applications for the 2013 Five Star/Urban Waters Restoration Program. In 2013, NFWF anticipates that approximately \$1,500,000 in combined total Five Star/Urban Waters funding will be available. The application **deadline** is **February 7, 2013**; click [here](#) to apply or for more info.

The [Clif Bar Family Foundation](#) has a **Small Grants** and (by invitation only) **Large Grants Program**. Small Grants average about \$8,000 each and are awarded for general organizational support or to fund specific projects. Priority is given to applicants that address the [Foundation's mission and funding priorities](#) and achieve one or more of the following: protect the Earth's beauty and bounty; create a robust, healthy food system; increase opportunities for outdoor activity; reduce environmental health hazards; and build stronger communities. The quarterly application **deadlines** are **February 15**, May 15, August 15, and November 1. Click [here](#) for more info and [here](#) to

take the eligibility quiz and begin the on-line application process.

The 5th Annual [Siemens We Can Change the World Challenge](#) invites **teams of students and their adult advisors to tackle environmental problems or issues and find replicable green solutions**. The Challenge is a collaborative effort of the [Siemens Foundation](#), [Discovery Education](#), the [National Science Teachers Association](#), and the [College Board](#). A panel of environmental experts and science educators will judge teams based on their research, analysis, and the potential of their solution to be replicated on a larger scale. High school students are specifically challenged to address energy, **biodiversity, land management, water conservation and cleanup**, or air and climate. Student and teacher/mentor prizes, which vary according to grade level, include scholarships, savings bonds, school grants, adventure trips, school assemblies, and more. This year's Challenge will award prizes totaling more than \$300,000. The **deadline** to participate in the Challenge is **March 5, 2013**; click [here](#) for more info.

The [New England Biolabs Foundation](#) (NEBF) is a private, independent foundation whose mission is to **foster community-based conservation of landscapes and seascapes and the bio-cultural diversity found in these places**. Working internationally as well as locally (esp. the **North Shore of Massachusetts**, where the [company's headquarters](#) are located), the Foundation supports **primarily grassroots organizations**. The Foundation seeks to **support communities in stewardship of their landscapes and seascapes**, and funding priorities include the **conservation of biological diversity, maintaining ecosystem services** (water, soil, carbon sequestration, etc.) and **ecological restoration involving native species** (tree planting, e.g.). Priority will be given to those efforts linked to existing conservation areas already valued by communities, as projects which **foster civic engagement** of communities **through creative facilitation and other methods of stakeholder involvement** (e.g., public meetings, community mapping). Click [here](#) for the current NEBF grant guidelines, which require the submission of a [letter of inquiry](#) (LOI), and click [here](#) early in 2013 to learn about the next deadline for LOIs and invited proposals.

The [Gulf of Maine Council on the Marine Environment](#) has put out a call for nominations for its annual **Visionary, Longard, Susan Snow-Cotter Leadership, Industry, and Sustainable Communities Awards**. Click [here](#) for more info on these awards and to download nomination forms, then click [here](#) to upload completed forms; the **deadline** is **March 30, 2013**. Contact Michele L. Tremblay at (603) 796-2615 or mlt@naturesource.net with any questions.

The [Home Family Foundation](#) supports the work of nonprofits (particularly those active in the **Merrimack Valley** and southern NH) in the areas of **conservation**, education, health and human services, the arts, **wildlife preservation**, international development and relief and **environmental sustainability**. Grants range in size from \$2,500 to \$25,000. The grant application **deadlines** are **March 31st** and September 30th. Click [here](#) to download an application form and [here](#) for more info.

For over 70 years, the Golub Corporation, parent company of Price Chopper Supermarkets, has believed in and practiced good corporate citizenship. To that end, [Price Chopper's Golub Foundation](#) was established in 1981 in an effort to enhance and improve the quality of life within Price Chopper communities. The Foundation provides financial support to eligible charitable organizations with a current 501(c)(3) tax exempt status [located within Price Chopper's marketing areas](#) in New York, **Massachusetts** and elsewhere in the Northeast. Contributions are made through planned, continued giving programs in the areas of health and human services, arts, culture, education, and youth activities. The Foundation favors family-friendly, soundly managed organizations with a mission to enhance the communities where serviced by Price Chopper stores. Click [here](#) to apply or for more info.

[Trout Unlimited](#) (TU) and **Orvis** have teamed up to reconnect **1,000 miles** of habitable water for wild and native trout all across America by **removing, repairing or replacing faulty culverts** (click [here](#) for an example). This relatively [simple fix](#) can have enormous benefits for both fish and fishing. Orvis will [match all of its customers' donations](#) to this project, up to \$90,000—and the money will go to projects from coast to coast. Click [here](#) for more info.

Established by [The Conservation Fund](#) with a lead grant from the [U.S. Endowment for Forestry and Communities](#), [ShadeFund](#) provides loans to green entrepreneurs in such areas as sustainable forestry and forest products, sustainable or organic farming, eco-tourism, natural food and medicines, biomass, and energy efficiency projects. [Tax deductible contributions to ShadeFund](#) are pooled and lent to qualified small green businesses nationwide. As entrepreneurs repay their loans, those same dollars are recycled to help other entrepreneurs grow their businesses. ShadeFund loans range from \$5,000 to \$50,000. Most loans are expected to be \$20,000 or less. Prospective donors should click [here](#) and prospective borrowers should click [here](#).

Are you a young person working to start a community action project or program or take it to the next level? Do you need money to put your ideas into action? If you answered, “YES!”, you are eligible to apply for a \$500 [Do Something Seed Grant](#). These grants can be used towards project ideas and programs that are just getting started, or to jump-start your program and realize your ideas for the first time. These grants can also be used towards projects that are already developed and sustainable, towards the next steps of your project and organization to help you as you look to expand your project and grow your impact. Applications are accepted on a rolling basis; click [here](#) to apply or for more info. [See also the [Do Something Awards Program](#).]

While the Lincoln, MA-based [Ramsey McCluskey Family Foundation](#)’s primary interest is in supporting projects in K-12 education and the arts, it will consider funding environmental or farming organizations (like the [Waltham Fields Community Farm](#)) within a 50-mile radius that engage in such activities. The Foundation prefers prospective applicants to [submit a Letter of Inquiry](#), and then submit a full application if invited. Click [here](#) for more info.

The [Herman and Frieda L. Miller Foundation](#) supports **civic engagement, advocacy, and community organizing in Greater Boston and Eastern Massachusetts**. The Miller Foundation is also dedicated to **improving the infrastructure that supports vibrant urban community life**. Key elements toward achieving this goal include strong civic culture and community empowerment, neighborhood and citywide, and the development and maintenance of healthy physical settings that facilitate vigorous communities. While the Foundation accepts proposals **by invitation only**, [phone inquiries to staff](#) are welcomed. The related [Miller Innovation Fund](#) supports innovations, tools, and practices that help social justice organizations and their allies improve conditions and institutions in pursuit of an involved, informed, and active public.

The mission of the Northampton MA-based [Solidago Foundation](#) is “to promote justice, equity, sustainability and enfranchisement for all through charitable grantmaking to, and work with, **progressive, empowering, community-based organizations and collaborations**” (click [here](#) for an example). Click [here](#) to read about the Foundation’s funding strategy and priorities (which includes **environmental justice**) and [here](#) to contact the Foundation’s staff to explore the potential for Solidago’s support of your organization and/or project.

The **Crisp Family Foundation** (no web page) makes grants to educational, conservation and outdoor recreation projects, primarily in New York and New England. Groups seeking funding should submit a request to: Peter O. Crisp, c/o Eisner Lubin LLP, 1411 Broadway, New York, NY 11018. There are no specified application forms or deadlines.

The Cleveland, OH-based **Orvis Perkins Foundation** (no web page) makes grants primarily for conservation purposes. Groups seeking funding should submit requests to: Marilyn Best, Orvis Perkins Foundation, 1030 Hanna Bldg., 1422 Euclid Ave., Cleveland, OH 44115. Telephone: (216) 621-0465. There are no specified application forms or deadlines.

The Worcester-based **J. Irving & Jane L. England Charitable Trust** (no web page) makes “general purposes” grants, typically in the \$2-5,000 range, to conservation and other organizations, primarily in central Massachusetts. Groups seeking funding should submit requests in writing, detailing the charitable nature of the organization, to: Ann K. Molloy, Trustee, J. Irving & Jane L. England Charitable Trust, 370 Main St., Suite 800, Worcester, MA

01608. Telephone: (508) 756-2423.



Calendar

(sorted chronologically by date of event, submission deadline, etc.)

[River Network](#) is hosting [several upcoming webinars in December](#) that may interest you and/or others you know: the topics include a primer on the **National Pollutant Discharge Elimination System** (NPDES) and an intermediate training on the **NPDES Stormwater** permits. Click [here](#) to RSVP and [here](#) for more info. [Click [here](#) to access archived River Network webinars on a variety of topics, including [Biocriteria in the Real World](#); [Water Quality Standards 101](#); and [Advocacy 101: How to Build Relationships and Get Results with Decision Makers at All Levels of Government](#).]

The [Metropolitan Area Planning Council](#) (MAPC) is hosting a [Metro Boston Regional Trails and Greenway Summit](#), taking place on **Tuesday, December 11** and **Wednesday, December 12**. Part of the Summit will convene at the [MAPC's office in Boston](#), while field trips to nearby trail/greenway projects completed, planned or in process are also scheduled. A highlight of this Summit will be the **participation of several staff from the [Rails-to-Trails Conservancy](#), national experts in trail and greenway projects**. You are invited to take part in whichever portion of the Summit that interests you and fits your schedule. Click [here](#) to register or for more info, or contact [David Loutzenheiser](#) at (617) 451-2770 ext. 2061 or DLoutzenheiser@mapc.org for more info.

The [Lawyers Clearinghouse](#) is sponsoring a free program entitled [Free Labor - Is It Really Free? Legal Issues to Consider Before Hiring Volunteers, Interns or Employees](#) on **Tuesday, December 11, 2012** from 9:00 AM – 10:30 AM at the Boston Private Bank & Trust Company, Ten Post Office Square, Boston - 2nd Floor, Great Room (click [here](#) for directions). Speakers include [Brian Price, Esq.](#), [Joseph Hedel, Esq.](#), [Amanda Kool, Esq.](#) and the [Harvard Law School Transactional Law Clinics](#). A buffet of pastries, fruit, juices, coffee and tea will be available beginning at 8:30 AM. To RSVP (by 12/7 if possible), call (617) 912-3919 or click [here](#).

The [Radcliffe Institute for Advanced Study](#) is hosting a free talk and discussion by faculty member [Joan Ruderman](#) entitled [Hormonally Active Pollutants What Are They, What Can They Do, and How Do We Know They're Out There?](#), scheduled for **Tuesday, Dec 11, 2012** at 5:00 PM in the Sheerr Room, Fay House, [10 Garden Street](#) in Cambridge. Over the past few decades, an increasing number of chemicals that were designed for one purpose have now been found to have the surprising, additional ability to mimic hormones like estrogen. Examples of such chemicals, often called environmental estrogens, include certain pesticides, plasticizers, detergents, and compounds added to personal care products. There is growing concern that everyday exposures to these chemicals, and to others yet to be discovered, are contributing to increases in reproductive abnormalities, infertility, and estrogen-dependent cancers in both males and females. Click [here](#) for more info on the 12/11 talk, which is the final event in [Radcliffe's Water Lecture Series](#), which included a [symposium](#) and [several water-related talks by other faculty members](#), all of which are available for viewing on-line.

Come be inspired and learn about local and global approaches to community-based watershed management at an event entitled [Partnering for Healthy Rivers & Water](#), scheduled to take place on **Tuesday, December 11, 2012** from 6:00 PM – 8:00 PM at Genzyme, Roscoe Bradley Hall, 500 Kendall Street in Cambridge. The keynote Speaker will be Jim Wescoat from MIT, accompanied by panelists Kate Bowditch, Charles River Watershed Association, David Kramer, EcoLogic Development Fund and Alice Srinivasan, Global Greengrants Fund. Click [here](#) to register or click [here](#) or contact Rebecca Oliver at (617) 441-6300 or roliver@ecologic.org for more info.

The Arlington, MA Engineering Division has been hosting a public [Stormwater Awareness Series](#) designed to educate residents and businesses on stormwater and the environment. Stormwater professionals have made

presentations, followed by question and answer sessions, for the purpose of increasing awareness of these impacts and to provide information on how to reduce them. The fifth presentation in this series, [***Sustainable Landscaping***](#), will be held on **December 11th**, from 7:00 PM – 8:00 PM in the Selectmen's Hearing Room, Arlington Town Hall, 2nd floor. The speakers will be Michael Murray of Organic Soil Solutions and Christine Scypinski of Waterfield Design Group. Click [here](#) for more info on the 12/11 talk and [here](#) for info on past presentations, all of which are [available for viewing on-line](#).

A presentation entitled [***River Otters and Fishers in Massachusetts: A Tale of Two Weasels***](#) is scheduled to take place on **Tuesday, December 11, 2012**, beginning at 7:00 PM, at the [Nashua River Watershed Association's River Resource Center in Groton](#). Did you know that river otters and fishers are both members of the weasel family? These weasels have adapted themselves to the water, to the trees, and even your backyard. In our region, the weasel family ranges in size from the "red squirrel-sized" Long-tailed Weasel (or ermine) to these two large weasels, otters and fishers (fishers can be 3 feet long and weigh up to 16 lbs.). Presenting will be Trina Moruzzi, Wildlife Biologist with the MassWildlife. Come learn the basics of river otter and fisher biology and ecology. Trina will talk about what these often mysterious animals are, where you can find them, what they eat, how they behave, and what signs you might see when they are present. While the event is free, space is limited, so pre-registration is strongly recommended. To pre-register, please contact Pam Gilfillan, NRWA Development Associate, at (978) 448-0299, or email PamG@NashuaRiverWatershed.org.

The [Waquoit Bay National Estuarine Research Reserve](#) (WBNERR) is sponsoring an event entitled [***Going It Together: A Workshop Examining a Regional Approach to Solving Cape Cod's Wastewater Challenge***](#). The workshop is scheduled to take place on **Wednesday, December 12** at the [Cultural Center of Cape Cod](#), 307 Old Main Street, South Yarmouth, beginning at 9:00 AM. While there is no cost for the workshop, pre-registration is required. Click [here](#) to register or for more info, or contact Tonna-Marie Rogers at (508) 457-0495 ext. 110.

Stormwater design requires specializing and customizing. This is due in part to TMDLs that specify a particular pollutant of concern (e.g., bacteria, nutrients, sediment) or parts of the country or world that have unique considerations (e.g., coastal waters, cold-water fisheries). [***Customizing Your Stormwater BMP Design for Specific Pollutants***](#), a webcast sponsored by the [Center for Watershed Protection](#) and scheduled for **Wednesday, December 12th, 2012**, will describe how stormwater BMP designs are being adapted to remove particular pollutants. This [webinar](#) will review the research on pollutant-specific removal pathways and provide case studies and resources for designing pollutant-targeting BMPs. Click [here](#) to register or for more info (a limited number of free scholarships are available).

Thunder Brook is a coldwater tributary to the **South Branch of the Hoosic River in Cheshire**. In 2012, with the assistance of the DER and other partners, the Town of Cheshire removed the Thunder Brook Dam and replaced an aging culvert with an open span. This project will restore critical riverine processes and allow for more natural movement of fish and wildlife throughout Thunder Brook and the Hoosic River. The **public is invited** to an event celebrating this ecological restoration project (brief remarks followed by a guided site tour) on **Friday, December 14**, from 10:30 AM to 12:00 Noon. The event will take place at the Cheshire Town Hall, 80 Church Street in Cheshire.

The [New England Interstate Water Pollution Control Commission](#) (NEIWPCC) is [currently seeking abstracts](#) for conference presentations on topics related to nonpoint source pollution to be made at the [***24th Annual Nonpoint Source Pollution Conference***](#), to be held May 14-15, 2013 in Burlington, VT. The **deadline** for submission is **December 14, 2012**; click [here](#) or write to [Clair Ryan](#) for more info. [Presentations from the 2012 and earlier annual NEIWPCC NPS conferences are available by clicking [here](#).]

The [Society for Ecological Restoration](#) (SER) is now [accepting proposals for symposia, workshops and training courses](#) to be held during its [***5th World Conference on Ecological Restoration***](#) in Madison, Wisconsin, USA from October 6-11, 2013. The **deadline** for submitting a proposal is **December 15, 2012**; click [here](#) for more info.

A webinar entitled [*Getting Started in Green Infrastructure—Ten Keys to Jumpstart Your Green Infrastructure Program*](#) is scheduled to take place on **Tuesday, December 18**, beginning at 2:00 PM. The presenter is [Andy Reese](#), Vice President, AMEC Environment & Infrastructure. Join Andy Reese as he draws from his experience assisting some of the leading practitioners of Green Infrastructure and his 35 years as a leading consultant in municipal Stormwater management to explore key technical and institutional aspects of successful programs, ultimately building a framework and roadmap for the local municipality looking to step into Green Infrastructure. Click [here](#) to sign up or for more info.

The [Center for Watershed Protection](#) (CWP) and the [Association of Watershed and Stormwater Professionals \(AWSPs\)](#), in partnership with the University of Minnesota, [recently put out a call for abstracts for presentations](#) to be made at the [2013 International LID \(Low Impact Development\) Symposium](#), scheduled to take place in Saint Paul, MN from August 18-21, 2013. The **deadline** to submit abstracts is **December 19, 2012**; click [here](#) for more info.

The [Center for Nonprofit Success](#) is hosting a workshop entitled [*Volunteer Management 201: Essential ingredients and successful recipes for volunteer engagement*](#) which is scheduled for **Thursday, December 20** from 8:30 AM - 12:00 Noon in Boston. Click [here](#) to register or for more info.

[Mass. Audubon's Wellfleet Bay Wildlife Sanctuary](#) is currently inviting proposals for presentations to be made at the [2013 Cape Cod Natural History Conference](#), scheduled to take place on Saturday, March 9, 2013. Professional or personal research, studies, or observations focusing on the ecology, behavior, status, or distribution of local plants, animals, natural communities, and/or environmental restoration projects on Cape Cod are accepted. The **deadline** for proposals is **December 31**; click [here](#) or contact [Melissa Lowe](#) at (508) 349-2615 ext 107 for more info, or click [here](#) to view the 2012 Conference program.

You are invited to share your projects and presentations with the audience at the [69th Annual Northeast Fish and Wildlife Conference](#), scheduled to take place from April 7-9, 2013 in Saratoga Springs, NY. This annual event (aka the [NEAFWA](#) Conference) will attract over 500 natural resources professionals in the fields of wildlife biology, fisheries and fisheries management, information and education and law enforcement. The **deadline** for submissions is **January 4, 2013**; click [here](#) for more info.

A three-day course entitled [*Balancing Nature and Commerce in Rural Communities and Landscapes*](#) will take place from **February 4-6, 2013** at the [National Conservation Training Center](#) (NCTC) in Shepherdstown, WV. Community-based teams will focus on the economics, community character, natural resources, and partnership building skills necessary for creating sustainable communities. Teams will identify opportunities to differentiate their communities based upon their unique assets, have the opportunity to hear the latest trends in bringing alternative energy or transportation or sustainable agriculture practices to their rural communities, and develop specific action plans for implementation when they return home. The course is suitable for teams composed of community leaders and citizens, public land managers, and private landowners and businesses. Click [here](#) to learn how you/your community could benefit by enrolling in this course and [here](#) to download a team application. The application **deadline** is **January 4, 2013**.

The [Trustees of Reservations](#) will be hosting a screening of [*The Work of 1000*](#) documentary film in Holyoke on **Thursday, January 10, 2013**. In case you haven't already seen it, *The Work of 1000* tells the inspiring story of [Marion Stoddart](#), who mobilized the clean-up of one of America's most polluted rivers (the [Nashua River](#)) – for herself, for her community, and for future generations. The screening of the film will take place at the [Wistariahurst Museum](#). Mayor Alex Morse of Holyoke is invited to facilitate a discussion and Q&A with Marion Stoddart following the film. Click [here](#) for more info.

[*Diadromous Species Restoration Science 2013: Migration, Habitat, Species Interactions, and Management*](#), a conference sponsored by the [Diadromous Species Restoration Research Network](#) (DSRRN), is scheduled to take place from **January 10-11, 2013** at the University of Maine's Orono campus. Click [here](#) for more

info. [Click [here](#) to view presentations made at the 2012 Annual Meeting of the Mass.-based [River Herring Network](#).

The [Mount Grace Land Conservation Trust](#) is sponsoring a **Long Pond Loop Hike** taking place at the Tully Lake Reservation, Doane Hill Road, Royalston, on **Saturday, January 12, 2013** from 9:30 AM – 3:00 PM. Meet at the Tully Lake Campground parking area at 9:30 to walk the 7.5 mile Tully Long Pond trail. The moderately strenuous hike will be led by Appalachian Mountain Club hike leaders Don Flye and Dan Bolton and will be geared towards snowshoers, cross country skiers, or hikers, depending on snow coverage. Please bring a lunch or trail snacks and wear weather-appropriate clothing. Click [here](#) or RSVP to David Kotker at (978) 248-2055 ext.19 kotker@mountgrace.org if you plan on attending.

The following talks will be taking place at Northeastern University's Marine Science Center, 430 Nahant Road in Nahant (click [here](#) for directions): **Tuesday, January 15, 2013** at 7:00 PM: *The Eastern Oyster: An Iconic Fishery And Valuable Habitat*, by Dr. Jonathan Grabowski, Marine Science Center, Northeastern University; and, on **Tuesday, February 12, 2013** at 7:00 PM: *Behind The Lens: Experiences In Environmental Film-Making*, by Bill Haney, President and Founder, BluHomes, Inc. Click [here](#) or contact Carole McCauley at (781) 581-7370 ext.321 or c.mccauley@neu.edu for more info.

“**Environmental flows**” are defined as **the quantity, quality, and timing of water flows required to sustain freshwater ecosystems, human livelihoods, and the well-being of those who depend on them.** The science of ecohydraulics aims to analyze the interrelationship between water and the environment, the assessment of human induced environmental impact, and the development of water management strategies for harmonizing economic and ecological requirements. Elements of environmental flows include hydrology, geomorphology, biology, water quality, connectivity, legal institutional analysis, and public involvement. The [American Water Resources Association](#) (AWRA) is currently (until **February 8, 2013**) seeking abstracts for presentations for its [Technical Specialty Conference on Environmental Flows](#), to be held in Hartford, CT from June 24-26, 2013. Fisheries scientists, riparian vegetation ecologists, vertebrate and invertebrate biologists, hydrologists, hydraulic engineers, stream restoration specialists, educators, regulatory agencies, and water resources managers are invited to submit abstracts; click [here](#) for more info.

Later in the same week (June 26-28), in cooperation with the [Pinchot Institute](#), a **second AWRA Specialty Conference**, titled [Healthy Forests = Healthy Waters](#)”, will be held at the same conference venue in Hartford. The Conference will focus on the value of trees and forests on water resources, whether they are in the city, suburbs or rural areas. Abstracts of presentations that address any of the many issues associated with forest management for the protection of water supplies and aquatic communities are also sought for the *Healthy Forests=Healthy Waters Conference*, and with the same deadline (**February 8, 2013**); click [here](#) for more info. [Click [here](#) to read the [December, 2012 edition of the AWRA's Connections electronic newsletter](#) for more info on these conferences and other water-related topics.]

The [2013 Annual Meeting](#) of the [American Association for the Advancement of Science](#) (AAAS) will be taking place in **Boston** from **February 14-18, 2013**. Sessions will be held on such topics as: [Socio-Hydrology: Co-Evolution and Future of Human-Water Resource Systems](#); [U.S. Climate and Weather Extremes: Past, Present, and Future](#); [Partners for the Earth: Scientists and Religious Groups Working for the Environment](#) and [From Promise to Proof: How Ecosystem Service Science Is Transforming Real Decisions](#). Click [here](#) for more info.

A call for [abstracts of presentations and posters](#) and [suggestions for sessions](#) are currently (until **February 15, 2013**) being sought for the [2013 International Conference on Engineering & Ecohydrology for Fish Passage](#) (Fish Passage 2013), which is scheduled to take place from June 25-27, 2013 in Corvallis, OR. Abstracts are sought on the topics of technical fishways, nature-like fishways, stream restoration and stabilization, dam removal, road ecology, and the myriad of funding, safety, climate change, and other social issues surrounding watershed connectivity projects. Fish Passage 2013 follows the successful [Fish Passage 2012 conference, held at UMass Amherst in June 2012](#).

The state of biodiversity in 2013 presents a tremendous paradox. Biodiversity science is more productive today than ever before; the rate of new species discovery, for example, is higher than it's ever been. At the same time, the rate of species extinction is increasing dramatically due to human-mediated environmental degradation on a global scale. This crisis for the future of biological diversity offers unparalleled challenges and opportunities for the professional scientific community, which is responding with new approaches and a heightened sense of urgency, with increasing focus both on conservation of species and their habitats and on the major drivers of extinction. This is the subject of [***Biodiversity 2013: Crisis and Opportunity***](#) a lecture by Harvard Professor of Biology James Hanken, scheduled to take place on **Monday, February 25, 2013** from 7:00–8:30 PM at the Honeywell Building, Arnold Arboretum in Jamaica Plain. While the event is free, pre-registration is requested – click [here](#) to register or for more info.

The [Ecological Landscaping Association](#) (ELA) will be hosting its [***19th Annual Conference & Eco-Marketplace, Sustainable Habitats: Making Ecological Connections***](#), on **February 27 - 28, 2013** in Springfield. Click [here](#) for more info.

[***River Crossings: Linking River Communities***](#), a Research Conference and Workshop sponsored by the [River Management Society](#) (RMS), is scheduled to take place from **March 11-15, 2013** in Grand Junction, Colorado. The event will be held in cooperation with The Tamarisk Coalition, the International Submerged Lands Conference, and the Water Center at Colorado Mesa University. Click [here](#) for more info.

Last but not least: People in kayaks and canoes are reminded that **from September 15, 2012 to May 15, 2013, paddlers must wear their personal flotation devices (PFDs) while boating**. According to the [Massachusetts Environmental Police](#), most boating fatalities in Massachusetts are due to boaters who fail to wear PFDs while in small craft in cold water or cold weather situations. Waterfowl hunters using canoes or kayaks are reminded that this law also applies to them. Click [here](#) for more info.

On-line Resources

The [National Water Quality Monitoring Council](#) (NWQMC) was created in 1997 as a vehicle for bringing together diverse expertise needed to develop collaborative, comparable, and cost-effective approaches for monitoring and assessing our Nation's water quality. This is increasingly important as water issues are becoming more complex, resources are tighter, and the demand for high-quality water continues to grow in order to support a complex web of human activities and aquatic ecosystem needs. Resources at the NWQMC's web page include a biennial newsletter (click [here](#) to read the Fall 2012 issue), [presentations made at the 2012 NWQMC Conference](#), and [upcoming/archived webinars](#) on timely topics, such as [concerns cyanotoxins potentially affecting drinking water supplies](#); [Social Water: Harnessing the Power of Crowdsourcing to Involve Citizen Scientists in Hydrologic Data Acquisition](#); [Water Quality Report Cards - Assessments made accessible, the Massachusetts experience](#) and ["SMART" Monitoring: Strategic Monitoring and Assessment for River Basin Teams](#), both of which were presented by Warren Kimball of the Mass. DEP. [Click [here](#) to download the [Summer 2012 edition of the EPA's Healthy Watersheds News](#), which contains an article about a presentation made at the 2012 NWQMC Conference.]

[EPA's Technology Innovation and Field Services Division](#) has recently updated its [***Citizen's Guide Series to Cleanup Technologies***](#), a series of 22 two-page fact sheets designed to help Remedial Project Managers and Community Involvement Coordinators explain the basics of innovative and conventional treatment technologies to the public. Citizen Guide topics include [Ecological Revitalization](#), [Phytoremediation](#) and [Monitored Natural Attenuation](#). Click [here](#) to access the Guides or for more info.

EPA's [Environmental Justice In Action Blog](#) reports on agency activities and other issues relating to environmental justice and related concerns. See, e.g., [this entry from this past August](#), in which EPA announces

and is seeking feedback on its new [Community-Focused Exposure and Risk Screening Tool \(C-FERST\)](#), intended to increase the availability and accessibility of science and data for evaluating impacts of pollutants and local conditions, ranking risks, and understanding the environmental health consequences on your community; and [this entry from October](#), which announces the launch of [How's My Waterway](#) (see below).

Launched this past October to coincide with the [40th Anniversary of the Clean Water Act](#), the [How's My Waterway](#) app and website enables anyone with a smartphone, tablet or computer connected to the Internet to **access the water quality status of thousands of lakes, rivers and streams throughout the country**. Click [here](#) to read the press release accompanying the launch of *How's My Waterway* and [here](#) to view slides presented at a November 28, 2012 webinar entitled [How's My Waterway? and Other Water Quality Apps](#), which also highlighted the [SwimGuide](#) app, which helps you **find your closest beach and provides beach status information**, and the [Riverview](#) app, which lets you **share pictures of your favorite river and share information on its condition**. [This webcast will eventually be archived at [this location](#)].

[Nearly one in four households in the U.S. depends on an individual septic system or small community cluster systems to treat their wastewater](#). The EPA recently updated its [Septic \(Onsite/Decentralized\) Systems website](#) to address this important topic. The updated website includes a [suite of new case studies](#) demonstrating what communities across the country are doing to effectively manage decentralized wastewater infrastructure and find solutions to meet unique wastewater infrastructure needs. Other resources include an [FAQ](#) page, a [funding](#) page, [guidelines, manuals and policies](#), and [education and outreach materials](#), such as the EPA's new [Septic Smart](#) program (see below).

The EPA's new "[Septic Smart](#)" national outreach initiative is intended to **promote proper septic system care and maintenance by homeowners**. When properly sited, maintained and used, these systems serve to effectively treat and dispose of wastewater. Unfortunately, septic system back-ups and overflows can lead to costly homeowner repairs and can pollute local waterways, creating a risk to public health and the environment. SepticSmart aims to educate homeowners about proper daily system use and the need for periodic septic system maintenance. SepticSmart also provides industry practitioners, local governments and community organizations with tools and materials to educate their clients and residents. Click [here](#) or [here](#) for more info.

As part of EPA's effort to collaborate with state and local partners in **promoting nitrogen reductions from onsite systems**, EPA has released a [draft Model Program for Onsite Systems Management in the Chesapeake Bay Watershed for public comment](#). Development of this draft is pursuant to [Executive Order 13508 on Chesapeake Bay Protection and Restoration](#). While targeted for the states in the Chesapeake Bay watershed, the Model Program may be of **broader interest to other states dealing with the need to reduce nitrogen, phosphorus, and sediment inputs to other watersheds**. EPA is seeking public comment on the draft by **December 28, 2012**; click [here](#) for more info.

Earlier this year, the [EPA Decentralized MOU Partnership](#) developed and posted on-line four short papers highlighting the **uses and benefits of decentralized wastewater treatment** and examples of where they have played an effective role in a community's wastewater treatment infrastructure. These papers are: [Introduction to Decentralized Wastewater Treatment: A Sensible Solution](#); [Decentralized Wastewater Treatment Can Be Cost Effective and Economical](#); [Decentralized Wastewater Treatment Can Be Green and Sustainable](#); and [Decentralized Wastewater Treatment Can Protect the Environment, Public Health, and Water Quality](#). Click [here](#) for more info.

[The Choice is Yours: Green or Clean Water](#), the title of a short video about nutrient pollution recently posted to [EPA's YouTube Channel](#), illustrates what impacts an algal bloom can have on recreational uses of a waterbody. Another video, [Nutrient Pollution](#), provides a basic overview of nutrient pollution, including its impacts on our nation's water resources. Click [here](#) and [here](#) to learn more about the problem and what people can do to help solve it.

The EPA's [Urban Waters Voices](#) video series highlights **locally-led efforts to restore urban waters** in communities across the United States. These videos feature interviews with local urban water restoration activists describing efforts and strategies to improve urban water quality while advancing local community priorities. [Click [here](#) to see the segment featuring Bob Zimmerman of the [Charles River Watershed Association](#), [here](#) to read an inspiring urban river paddling story that recently ran in [Conservation Magazine](#); and [here](#) to read a [press release about the recent retrofit of a parking lot](#) adjacent to [Mill Brook in Arlington with porous pavement](#).]

An article in the [August/September 2012 edition](#) of the [EPA's Science Matters newsletter](#) reports on a study confirming that **[“daylighted” streams are many times more effective in removing nitrates than are buried streams](#)**. Click [here](#) to read it.

EPA's [National Estuary Program](#) (NEP), a place-based program to protect and restore the water quality and ecological integrity of estuaries of national significance, has released a first-ever interactive map, [NEPmap](#), with more than a decade's worth of NEP habitat data. NEPmap allows users to view water quality conditions in their estuary and surrounding watershed alongside NEP habitat projects. NEPmap users can also generate and print maps and reports, change map scales, turn on and off background layers, and interact with information points to provide a greater level of detail than a traditional static map. Click [here](#) to access the NEPmap.

[Achieving Hazard-Resilient Coastal & Waterfront Smart Growth](#), a recently-released report by NOAA and the EPA in consultation with the national [Smart Growth Network](#), builds on the Network's 10 smart growth principles to create coastal and waterfront-specific strategies for development. The guide includes an overview of the unique development challenges and opportunities along the water and provides specific approaches to development that include a description of the issues, tools and techniques, and case studies.

[Voluntary Step-by-Step Guide for Considering Potential Climate Change Effects on Coastal and Estuarine Land Conservation Projects](#), recently released by [NOAA's Office of Ocean and Coastal Resource Management](#) (OCRM), provides information on how to incorporate climate change considerations into coastal land conservation projects. While guide focuses on implementation of OCRM's [Coastal and Estuarine Land Conservation Program](#), the methodology described has broad application for conservation planning and land acquisition in a changing climate.

The [National Ecological Observatory Network](#), a project of the [National Science Foundation](#), provides a continental-scale observatory designed to **gather and provide 30 years of ecological data on the impacts of climate change, land use change, and invasive species on natural resources and biodiversity**.

Recent articles appearing in [Environmental Health Perspectives](#), a monthly, peer-reviewed journal put out by the [National Institute of Environmental Health Sciences](#) (NIEHS) and available on-line, include [Lessons of the Elwha River: Managing Health Hazards during Dam Removal](#) and [Superbug Hideout: Finding MRSA in U.S. Wastewater Treatment Plants](#).

[Protecting Drinking Water Sources through Agricultural Conservation Practices](#) is a collaborative toolkit that offers effective steps source water protection professionals working at the state level can take to build partnerships with the NRCS to get more agricultural conservation practices on the ground to protect sources of drinking water. Developed by the [Source Water Collaborative](#) with support from EPA and in consultation with NRCS, the toolkit includes insightful tips and highlights specific opportunities states can take advantage of immediately. In addition, the Source Water Collaborative is working with the National Association of Conservation Districts to develop a locally-focused supplement to the toolkit to provide a step-by-step process for collaborating with conservation districts. [See also info about the now-customizable [Your Water, Your Decision](#) brochure, where, with an easy online tool, it takes just a few minutes to make a custom guide that can emphasize local or regional issues, provide community and state resources, and/or include your organization's logo.]

You can now download every USGS topographic map, from every state, at every available scale, for free. Just visit the USGS's online store at <http://www.store.usgs.gov>, click on "[Map Locator & Downloader](#)", and select your desired map for downloading as a full-color .pdf file. You can also browse (and download for free) the next generation of USGS maps from the growing [USTopo](#) series, which features multiple layers that can be turned on or off for viewing, including contour lines, aerial/orthographic images, and street names.

Discovering recreational opportunities on public lands and waters is now more user-friendly at the recently-revamped [Recreation.gov](#) website. The website makes it easy to plan and book trips to the nation's parks, refuges, forests and other public lands. The website also serves as a "one-stop" shop for Americans to learn about hiking, fishing and other outdoor activities within a day's drive of their homes. Users can now search by location and activity, and the website will provide a list of federal recreation sites based on distance. Recreation sites are easily viewed on an interactive map, where users can click on icons to see the name of the museum, refuge or seashore, then click through to learn more. Other new features include "Go Lists" that highlight destinations, events and activities under particular themes. Click [here](#) or [here](#) for more info.

The [National Wild and Scenic Rivers System](#) web page (<http://www.rivers.gov>), recently spiffed up to provide more user-friendly access to expanded content, includes info pages on [already-designated wild/scenic river segments](#) (there are currently [three in Massachusetts](#), covering a portion of the [Westfield, Taunton](#) and [Sudbury/Assabet/Concord](#) river systems); a [W&S bibliography and Q&A search tool](#); an electronic copy of the *Wild & Scenic Rivers Guide for Riverfront Property Owners* brochure; and info on the "study process", in which rivers is considered for W&S designation. [A [bill was filed](#) this past August to authorize such a [study of a portion of the Nashua River System](#) for possible W&S designation - see the [Q&A sheet](#) prepared by the [Nashua River Watershed Association](#) for more info.] Click [here](#) for info on the [National Recreation Trail system](#) and [designation process](#), and [here](#) for info on already-designated NRT segments in Massachusetts.

Citizen scientists, sportsmen, birders, naturalists and other actively involved conservationists: Have you collected information this year to certify a vernal pool or report rare wildlife or plants and just haven't gotten around to filing the paperwork? The good news for you procrastinators is the electronic reporting system, the [Vernal Pool & Rare Species \(VPRS\) Information System](#), recently activated on-line by the [Mass. Division of Fisheries and Wildlife](#) (DFW). This reporting tool allows the interested public to electronically submit their observations of vernal pool and state-listed (rare) species through the web. No need to fill out paper forms, create copies of photographs and maps, or put them in the mail (though that is still an option). [Click [here](#) (for p.1) and [here](#) (for p.2) to read a feature article about the VPRS by Sarah Haggerty of the [Mass. Natural Heritage and Endangered Species Program](#) (NHESP) appearing in the April, 2012 edition of the newsletter of the [Association of Massachusetts Wetlands Scientists](#) (AMWS); and [here](#) to read an article on this new program in the [November 2012 MassWildlife News](#).]

Want the facts on endangered species in Massachusetts? Visit the [Massachusetts List of Endangered, Threatened and Special Concern Species](#) section of [MassWildlife's NHESP webpage](#). Fact sheets for all state-listed birds, fish, mammals, reptiles, amphibians, invertebrates and plants (with the exception of some whales and sea turtles) have been posted. Each fact sheet includes an image or drawing of the species, a brief description, listing of similar species, habitat preferences, life history, range map, management recommendations and references.

[FYI in case you don't already know – [MassWildlife's Field Headquarters relocated](#) this past September from Westborough to a temporary home at 100 Hartwell Street, Suite 200, West Boylston, MA, 01583 while a new Field Headquarters building is constructed in place of the old one. Contact phone numbers and emails for Field Headquarters staff remain the same during the relocation. Click [here](#) for directions to the West Boylston office or for more info.]

The [Fall 2012 edition of MassDEP's Enviromatters](#) electronic newsletter includes [updates on the agency's regulatory reform initiatives](#), some of which fall into the theme of "incentivizing environmentally beneficial projects" like dam removal and restoring full tidal flow (click [here](#) for more info). The newsletter also [reports on](#)

[recent agency enforcement activity, grant awards](#) (click [here](#) to read about recent grants to control nonpoint source pollution and [here](#) to read about how funds flowing from the settlement of the Holyoke coal tar pollution of the Connecticut River will fund several projects benefitting riverine organisms and habitats including the DER-led Amethyst Brook restoration), the [phosphorous reduction legislation](#) recently signed by Governor Patrick, and an [article about MassDEP's new FAST \(Field Assessment and Support Team\) mobile laboratory](#), which enables the agency to provide real-time assessment and monitoring of the potential environmental and public health impacts during disasters (click [here](#) for more info).

The [Massachusetts Emergency Management Agency](#) (MEMA) recently launched [ping4alerts!](#), a free **smartphone application** for iPhone and Android devices that will enable them to **receive emergency information** from MEMA as well as **severe weather alerts** from the National Weather Service. Click [here](#) to download the app or for more info.

Non-Government On-line Resources *(in rough alphabetical order – the following are offered for information purposes only and are not an endorsement of the items listed below)*

Alliance for Water Efficiency

<http://www.allianceforwaterefficiency.org>

Among the resources available at AWE's website is a recently-posted [Water Efficiency Watch](#) newsletter covering current events relating to **water conservation**, such as a [report](#) on the [surprising results of a drainline flushing study](#); info on the [water resource impacts of hydrofracking](#); [info on the EPA's new guide](#) entitled [WaterSense at Work: Best Management Practices for Commercial and Institutional Facilities](#), and the [opportunity to submit abstracts](#) (until **January 18, 2013**) for the [2013 WaterSmart Innovations Conference and Exposition](#), to be held next October in Las Vegas. [Click [here](#) for more info on AWE's soon-to-be-launched "[Never Waste](#)" [Consumer Media Campaign](#), and [here](#) to read a recent posting to the [New York Times' Green Blog](#) on [water conservation videos posted to YouTube](#).]

AllOneWater (AOW)

<http://www.allonewater.com>

In nature, no distinction is made between wastewater and drinking water, between stormwater, seawater, and what falls from the sky. Sooner or later, the public and the water industry will recognize that it's time to decompartmentalize water resource management. To do away with the silos, the polarized stakeholders, and the balkanized water communities, and instead recognize that any water is All One Water. That is the impetus behind [Forester Media](#) (the publisher of [Stormwater](#), [Water Efficiency](#) and several related trade publications)'s creation of this new website. Billing itself as the "most expansive water news clearinghouse on the Web", AOW includes content about all areas of the water cycle, from protection and collection to treatment and delivery, and everything in between, presented concurrently with breaking news and studied analysis of emerging water policy and regulations. See, e.g., [AOW's coverage of the Smithsonian's new exhibit, *Reclaiming the Edge: Urban Waterways and Civic Engagement*](#).

American Trails

<http://www.americantrails.org>

American Trails is the only national, nonprofit organization [working on behalf of all trail interests](#), including hiking, bicycling, mountain biking, horseback riding, water trails, snowshoeing, cross-country skiing, trail motorcycling, ATVs, snowmobiling and four-wheeling. Since its [formation in 1988](#), the group has been involved in everything from training trails advocates to increasing [accessible trail](#) opportunities for persons with disabilities. The organization supports local, regional, and long-distance trails and greenways, whether they are in backcountry, rural or urban areas. American Trails' goal is to [support America's trails](#) by finding common ground and [promoting cooperation](#) among all trail interests. Resources available at this website include an extensive [library of trail design](#)

[and building techniques](#), a [national inventory of trails and trail organizations](#) (click [here](#) to see the info for Massachusetts) and [archived webinars](#) on such topics as [water trail accessibility](#) and [the art of sustainable trail management](#).

Built Environment Assessment Training (BEAT) Institute

<http://www.med.upenn.edu/beat>

While the Institute's week-long training program for 2012 has already taken place (in Boston this past summer), this web page offers a free on-line course entitled **Assessing The Built Environment for Physical Activity**, an introductory course to learn how to assess streetscapes, parks and trails for physical activity. Click [here](#) to register or for more info.

ChemHAT (Chemical Hazards and Alternatives Toolbox)

<http://www.chemhat.org>

Have you wanted to find out more about the chemicals you're exposed to but lack the time to do your own research?

Or have you tried to do research but couldn't make heads or tails of the confusing—and sometimes contradictory—science out there? [ChemHAT](#) is a new, free tool, designed by workers for workers, to make it easier to learn about chemicals. With ChemHAT's searchable database, you can easily read about the scientific findings on the short and long-term health effects of over 10,000 commonly used chemicals. The web page will also enable you to partner with others on chemicals policy reform by identifying hazardous chemicals and identifying and advocating for safer alternatives.

Coastal Conservation Networking

<http://www.landtrustalliance.org/ccn>

Set up and maintained by the [Land Trust Alliance](#), the Coastal Conservation Networking web page provides **land trusts working in coastal areas with resources to help address unique challenges associated with climate change**, including the **protection of wetlands, buffers, and other natural ecosystems that will increase resilience to climate change impacts**, such as sea level rise. Resources at this page include links to: [NOAA's Coastal County Snapshots](#) (provides quick looks at your county's flood exposure, ocean jobs and wetland benefits using easy-to-understand stories, charts and graphs); [TNC's Coastal Resilience project](#) (provides communities, planners, businesses, and elected officials with easy access to information on projected coastal changes due to sea level and storm events coupled with solutions for coastal planning, land protection, and comprehensive management actions); and [NOAA's Habitat Priority Planner](#) (a geographic information system (GIS) tool for identifying and prioritizing areas for conservation, restoration and land use planning).

[See also the LTA's [Climate Change Toolkit](#), which includes tools useful to **land trusts active in non-coastal communities**; [the November, 2012 special edition of TNC's Science Chronicles, focusing on resilience](#); [Climate Central's Surging Seas](#) tool; and [Local Communities Adapting to Climate Change](#), a free, online course offered by the [Lincoln Institute of Land Policy](#) that uses videos, interactive exercises, and self-assessments, to introduce tools for climate change adaptation planning, assessing climate change risks, climate downscaling, collaborative decision-making, and scenario planning. Decision makers can use these practical tools for everyday land use, development, and infrastructure decisions to reduce vulnerability and enhance resilience..]

Compensatory Mitigation for Streams Under the Clean Water Act

<http://www.Americanrivers.org/webinar>

The link above takes you to an archived version of a webinar (along with related materials and links) entitled [Compensatory Mitigation for Streams Under the Clean Water Act](#), hosted by [American Rivers](#) back on

September 14. While a related article on this topic that ran in the [June 2012 edition of the Journal of the American Water Resources Association](#) (JAWRA) is no longer available for free on-line (read the abstract [here](#)), it can be still accessed for a fee by clicking [here](#).

Discover Water: The Role of Water in Our Lives

<http://www.discoverwater.org>

Discover water.org is a new interactive, online learning tool that enables [Project WET](#) to bring its lessons to an even broader audience of schools and students in a format today's high-tech students will find engaging. Young visitors can play games, read stories, watch videos, print coloring pages and commit to taking action to improve water resources, while educators and parents can use the site to teach engaging, science-based lessons around water. Targeting learners aged 8-12, [DiscoverWater.org](#) shows children how water affects them—and how they can affect water. The web experience also brings important water lessons to life in a way that makes learning fun and encourages today's children to be tomorrow's responsible stewards of water resources. [DiscoverWater.org](#) combines kid-friendly illustrations and animation with engaging, science-based activities covering everything from the water cycle and oceans to water conservation and the role of water in the human body. Students can also collect "Take Action" items throughout the site and create their own personalized printable "Take Action Poster" to help them remember how they can conserve and protect water. [Click [here](#) for info about the [Project WET Curriculum and Activity Guide 2.0](#).]

Giftworks

<http://www.missionresearch.com>

Designed specifically for nonprofits, GiftWorks helps organizations manage donor contacts and email outreach via a straightforward, easy-to-use interface. GiftWorks 2013 also offers new features, including integration with [Constant Contact](#) and social media sites and better-than-ever reporting, analysis, and communications tools. [TechSoup](#) is currently offering GiftWorks 2013 at a deep discount for nonprofits with annual budgets at or below \$50,000; click [here](#) for more details.

Giving Common

<http://www.givingcommon.org>

Established this past May by [The Boston Foundation](#) (TBF), [The Giving Common](#) is a free, web-based platform designed to provide comprehensive and current information about nonprofit organizations across the Commonwealth, and to make online charitable giving easy and quick. The Giving Common allows **nonprofit organizations located and/or active in Massachusetts** to tell their story in their own words in an organized, detailed way. Visitors to the site can search by issue area, geography and other variables with the option to "donate now" with their credit card or through a [TBF Donor Advised Fund](#). Many nonprofits (such as the [Charles River Watershed Association](#), the [Conservation Law Foundation](#) and [Mass. Audubon](#)) have already set up profiles in The Giving Common, and indeed received funds through TBF's [Giving Common Challenge 36-hour on-line fundraising campaign](#) that took place this past October. Nonprofit groups interested in participating in The Giving Common should click [here](#), prospective donors should click [here](#), or contact The Giving Common at GivingCommon@tbf.org or (617) 338-1624 for more info.

Giving Library

<http://www.givinglibrary.org/>

Recently launched by the [Laura and John Arnold Foundation](#), the purpose of the [Giving Library](#) is to [help philanthropists learn about various nonprofit organizations and make informed, strategic giving decisions](#). The library includes a collection of videos featuring two hundred and fifty [nonprofits](#) (including [American Rivers](#)) working in the areas of criminal justice, education, the **environment**, government, health, and humanitarian aid, among other areas. A short-format overview introduces each organization's work, while a series of interviews with

its founder or executive director provides insights into its objectives, effectiveness, measures of success, accomplishments, and future plans. Philanthropists also can register to communicate directly with participating nonprofits, anonymously or by voluntarily identifying themselves, through the site's [Connection Center](#). Nonprofits wishing to participate in the Giving Library are invited to apply by clicking [here](#).

Google for Nonprofits

<http://www.google.com/nonprofits>

The [Google for Nonprofits program](#) offers organizations access to a suite of highly discounted or free Google products (like [Google Grants](#)) that can help you streamline your organization, extend your reach, collaborate with constituents, and get supporters to take action. Click [here](#) or [here](#) to access an [archived Guidestar webinar from this past August on the benefits of Google for Nonprofits](#), or read this [blog](#) for more current info.

The Great Marsh – A Coastal Treasure in Our Back Yard

<http://www.greatmarsh.org>

Extending along the coast from Cape Ann to New Hampshire, the North Shore's Great Marsh, the largest continuous stretch of salt marsh in New England, includes over 20,000 acres of marsh, barrier beach, tidal river, estuary, mudflat, and upland islands. This unique complex of natural systems is of tremendous [scenic, ecological, economic, recreational, and cultural value](#), on the coastline as well as inland, where land is connected by river and stream networks. Resources available at this newly spiffed-up website include info on [recent scientific studies](#) of the marsh, a [slide show](#) with many stunning aerial photos, [PowerPoint presentations](#) made at the [2012 Great Marsh Symposium](#), and a [“Take Action” page](#), enumerating the many threats to the Great Marsh and what you can do in response.

Groundwork USA

<http://groundworkusa.org>

Modeled after a [similar program in Great Britain](#), Groundwork USA is national non-profit that coordinates, supports, and strengthens [local Groundwork Trusts operating across the U.S.](#). [There are currently two active Groundwork Trusts in Massachusetts: [Groundwork Lawrence](#) and [Groundwork Somerville](#) ([Groundwork Springfield](#) is no longer active), and there is one in [Providence, RI](#)]. Each local trust is dedicated to renewing and restoring distressed neighborhoods through environmental projects and programs that bring local residents, government, youth, and businesses together. Groundwork trusts, which are independent non-profits, are established in places with an industrial past that have been largely left behind by economic growth in the last few decades. Resources at this page include two new reports documenting Groundwork trusts' decade-long on-the-ground successes in [restoring urban waterways](#) across the country: [Lessons Learned – Reclaiming Urban Waters](#) and [Youth and Urban Water Works](#). Contact Doug Evans, Groundwork USA Program Manager, at douglas_evans@nps.gov or (617) 223-5124 for more info.

Join.me

<http://www.join.me>

Have you been in telephone conference call meetings where you wished everyone was in the room with you so you could share visual items on your computer with them? You can now easily accomplish that with a free and easy to use screen sharing tool called “join.me”. All you need to do (the person sharing their screen) is type join.me on your browser's address bar, select the “basic”, in the “share” area, and click on the orange (play) button (the first time you do this you will get a prompt to download a file). The application opens and you will see a 9 digit random number at the top, which you will share with participants. The viewers don't have to download anything. They just type join.me on their browser's address bar, and enter the number given to them by you (the person sharing their screen) in the “join” textbox, and click on the green (play) button.

Keepers of the Waters

<http://keepersofthewaters.org>

Founded and directed by environmental artist [Betsy Damon](#), Keepers' mission is "to inspire and promote projects that combine art, science and community involvement to restore, preserve and remediate water sources". Resources available at Keepers' recently spiffed-up web page include [living water garden design principles](#), [water facts and statistics](#), and [project and professional networks](#), which enable living water practitioners to share their successes and learn from others.

Massachusetts Rivers Alliance

<http://massriversalliance.org/>

The Alliance's mission is to protect and restore rivers across the Commonwealth as well as to strengthen, connect, and empower individuals and organizations working to protect rivers in the state. Resources on this page include a list of (and links to) member organizations, and Proceedings, Presentations and related materials of the [River Monitoring and Climate Change Conference](#), sponsored by the Alliance and held in May of 2011. [Click [here](#) to read the results of a [survey of Conference participants to learn the extent \(if any\) they are engaged in river monitoring and tracking parameters that may be indicators of the effects of climate change](#); and [here](#) to access additional materials related to this conference.]

Open Green Map (OGM)

<http://www.opengreenmap.org>

OGM was created by the folks at [Green Map](#), an on-line mapping tool that enables the creation of "green maps" that serve as perspective-changing community 'portraits' and act as comprehensive inventories for decision-making as well as practical guides for residents and tourists. Mapmaking teams pair [adaptable tools](#) and [universal iconography](#) with local knowledge and leadership as they chart green living, ecological, social and cultural resources. OGM adds an interactive capacity to Green Maps. Over 300 OGM maps have already been established (see, e.g., the OGMs for [Quincy, MA](#) and [Providence, RI](#)), and you are invited to [annotate them](#) or make your own. [For another creative take on on-line maps, you might want to check out **virtual nature trail maps**, such as the ones for the [Salt Marsh Trail](#) in Quincy or the [Nantucket Field Station](#).]

Razoo

<http://www.razoo.com>

An on-line "crowdfunding" fundraising platform, Razoo's mission is "to better the entire cause marketplace by elevating social fundraising practices, and strengthening relationships between nonprofits, donors, and fundraisers". Razoo provides [fundraising tools for nonprofits](#) and enables [individuals to rally support for their favorite charitable causes](#). Razoo's "[Giving Days](#)" community fundraising tool has raised over \$100 million for its nonprofit partners. Razoo's '[Inspiring Generosity](#)' blog covers social fundraising trends, news, and case studies, democratizes traditional development best practices, and provides other relevant information. Mass. nonprofits currently enrolled in Razoo include the [Franklin Land Trust](#), the [Mount Grace Land Conservation Trust](#) and the [Charles River Watershed Association](#).

RI Habitat Restoration Team Rivers Working Group

<http://nbep.org/riverworkinggroup.html>

The mission of this working group is **to restore river ecosystems throughout the [Narragansett Bay Region \(NBR\)](#) in Massachusetts and Rhode Island through physical improvements such as dam removal and other improvements to aquatic habitats**. The group's approach is to improve state and local planning, policy, law and funding in order to increase the quantity and extent, while improving the quality of river restoration projects throughout the NBR. Resources available at this site includes a draft document entitled [Rivers Unbound:](#)

[Restoring the Rivers of the Narragansett Bay Region](#). Contact Tom Ardito at (401) 874-6492 or tom@nbep.org for more info. [Note: an [article about a related initiative for RI and adjacent coastal areas in Mass.](#) appears in the [latest edition \(Winter 2012-13\)](#) of the [Narragansett Bay Journal](#). Click [here](#) to access info about that issue, and [here to access the previous \(Fall 2012\) issue](#), which contained an [article](#) by the DER's Nick Wildman entitled [The Economic Value of Healthy Ecosystems](#)].

Seeking Grant Money Today
<http://thegrantplant.blogspot.com>

This blog instructs, shares current events in, and gives practical examples of how nonprofit 501(c)(3) organizations achieve successes using professional, nonprofit, best practices. See, e.g., the recent posting entitled [A List of Specific Fundraising Methods Particularly Helpful At the End of the Calendar Year](#).

Shopify
<http://www.shopify.com>

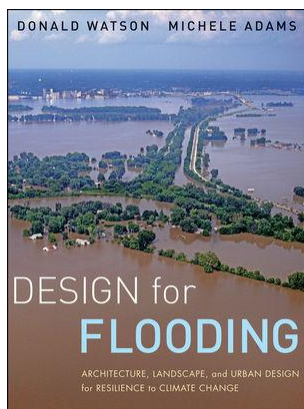
While the Shopify tool is used primarily by for-profit businesses to sell merchandise on-line, the same platform can be [used by non-profits to raise funds](#) in a similar manner. Shopify allows you to design your own online store, manage inventory, and accept credit card payments securely. This means your organization could raise funds with Shopify by selling branded merchandise such as t-shirts or tote bags. The Shopify platform is also useful for other fundraising efforts, such as athletic events or library book sales. Click [here](#) or [here](#) for more info.

Sudbury-Assabet-Concord Cooperative Invasive Species Management Area (SuAsCo Cisma)
<http://www.cisma-suasco.org>

Comprised of over two-dozen like-minded [partner organizations](#), the SuAsCo Cisma was established several years ago to better enable the partners to share information, educate, and plan strategies for managing and controlling [invasive species](#) in the [Sudbury, Assabet, and Concord \(SuAsCo\) watershed](#). This Cisma intends to protect the biological, aesthetic, cultural, historical, and recreational values of natural areas, farmland, water resources, and scenic vistas by cooperating, coordinating activities, and sharing resources necessary for the prevention and control of invasive species on public and private lands across ownership boundaries within the Cisma. Resources on this page include info on invasive plant [removal](#) and [disposal](#) methods and an [opportunity to get involved in the Cisma's work](#).

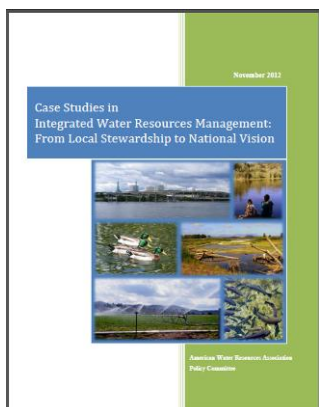
Publications, Videos, etc.

(the following are offered for information purposes only and are not an endorsement of the items listed below.)

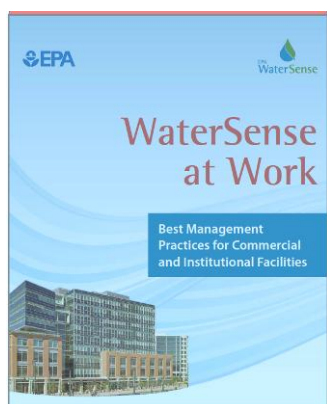


In [Design for Flooding: Architecture, Landscape, and Urban Design for Resilience to Climate Change](#), published two years ago by [Wiley](#), authors Donald Watson and Michael Adams declare that bad urban planning makes stream and river flooding worse than it was before trees and other natural ground cover were replaced by impermeable roads and parking lot surfaces. Heavy rain that heretofore was absorbed into the earth and stayed put now causes streams to go over their banks, seriously damaging terrain and buildings. *Design for Flooding* details necessary landscape redesign methods to restore natural vegetation necessary for healthy ground levels that not only reduce stream levels but act as saturated ground water reservoir benefit for times of drought. The book also covers the dangers of coastal flooding that threatens more than 40% of the US population. [Click [here](#) to read (on p.6) a review of *Design for Flooding* in the February 2012 edition of the [Rivers Alliance of Connecticut's Streamlines](#) newsletter.]

Over the past century, the U.S. Army Corps of Engineers has built a vast network of water management infrastructure that includes approximately 700 dams, 14,000 miles of levees, 12,000 miles of river navigation channels and control structures, harbors and ports, and other facilities. Historically, the construction of new infrastructure dominated the Corps' water resources budget and activities. Today, national water needs and priorities increasingly are shifting to operations, maintenance, and rehabilitation of existing infrastructure, much of which has exceeded its design life. Since the mid-1980s, however, federal funding for new project construction and major rehabilitation has declined steadily. As a result, much of the Corps' water resources infrastructure is deteriorating and wearing out faster than it is being replaced. **[Corps of Engineers Water Resources Infrastructure: Deterioration, Investment, or Divestment?](#)**, soon to be published by the [National Academies Press](#), explores the status of operations, maintenance, and rehabilitation of Corps water resources infrastructure, and identifies options for the Corps and the nation in setting maintenance and rehabilitation priorities. Click [here](#) for more info.

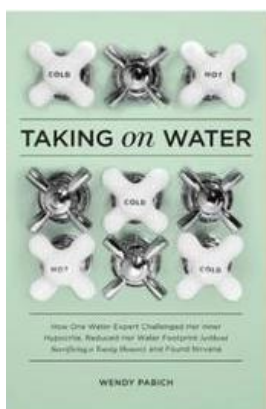


[Case Studies in Integrated Water Resources Management: From Local Stewardship to National Vision](#), recently published by the [American Water Resources Association](#), showcases state, multi-state, and regional efforts to implement Integrated Water Resources Management (IWRM). The collected case studies dispel the mystery behind IWRM by discussing the process of shifting to an IWRM approach and the resulting costs and benefits. Together, the selected set of cases show that IWRM is a powerful and common-sense approach for managing water in the United States. Click [here](#) to download a copy of this publication and [here](#) for further discussion of this topic. [IWRMs have been conducted for several Massachusetts communities, including [Ipswich](#), [Lancaster](#), and [Holyoke](#).]

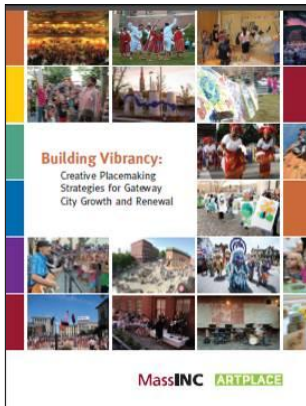


America's commercial and institutional facilities use 17 percent of the water provided by the nation's public water supplies, according to the USGS. Building owners and managers can significantly reduce their water use, energy requirements, and operating costs by understanding how to use water more efficiently in their facilities. The new publication **[WaterSense at Work: Best Management Practices for Commercial and Institutional Facilities](#)**, put out by the [EPA's WaterSense Program](#), is a compilation of best management practices to help commercial and institutional facilities better manage their water use through efficient practices and products. *WaterSense at Work* addresses water use in educational facilities, offices, restaurants, hotels, hospitals, laboratories, and other organizations and presents numerous tactics for businesses and organizations to achieve water, energy, and operational savings, as well as case studies on different types of facilities that have achieved savings by using water efficiently.

Click [here](#) for more info and [here](#) to download a copy of the publication.

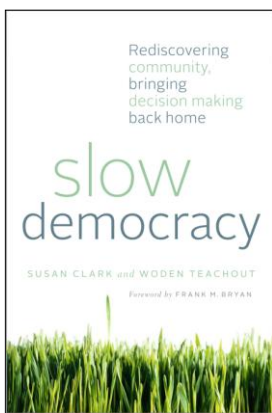


[Taking on Water: How One Water Expert Challenged Her Inner Hypocrite, Reduced Her Water Footprint \(Without Sacrificing a Toasty Shower\), and Found Nirvana](#) is the story of author [Wendy Pavich](#)'s personal quest to extract and implement – from a dizzying soup of data and analysis – day-to-day solutions to reduce water use in her life. She sets out to examine the water footprint of the products she consumes, process her own wastewater on-site, revamp the water and energy systems in her home, and make appropriate choices in order to swim the swim. Part memoir, part investigation, part solution manual, the book is filled with ruminations on philosophy, science, facts, figures, and personal behavioral insights; metrics to track progress; and guidelines for the general public to make small but important changes in their own lives. Told with humor and grace, *Taking on Water* offers a raw account of how deep we need to dig to change our wasteful ways. Click [here](#) to order the book or for more info.



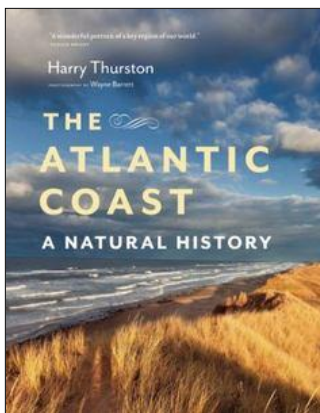
[Building Vibrancy: Creative Placemaking Strategies for Gateway City Growth and Renewal](#), a report issued this past summer by [MassINC](#), looks at the power of creative placemaking as strategy for growth and renewal in the [Commonwealth's Gateway Cities](#). The struggle these cities have endured in recent years obscures their untapped potential in an economy that increasingly puts a premium on attractive, authentic, and livable communities. This has not been lost on a new generation of artists and cultural entrepreneurs, who are finding inspired ways to reinvent our Gateway Cities through creative placemaking. *Building Vibrancy* provides an overview of this activity, uncovering the successes and challenges Gateway Cities encounter as they work to implement creative placemaking strategies. The report also offers recommendations to foster and build upon creative placemaking as an economic development strategy. Click [here](#) to download a copy of the report. [The [Mass. Executive Office of Energy and](#)

[Environmental Affairs](#)' related [Gateway Cities Parks Program](#) has provided funding for several major parks and trail projects that are now complete or nearing completion, including the Concord River Greenway in Lowell, Gateway Park along the Nashua River in Fitchburg, and the Spicket River Greenway in Lawrence.]

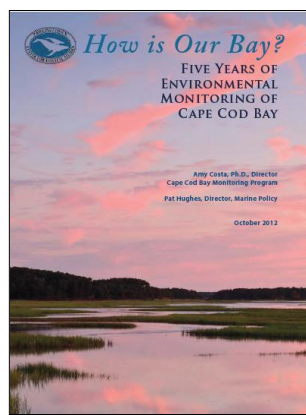


In **[Slow Democracy: Rediscovering Community, Bringing Decision Making Back Home](#)**, co-authors [Susan Clark](#) and Woden Teachout document the range of ways that citizens around the country are breathing new life into participatory democracy in their communities. Readers will learn the stories of residents who gain community control of water systems and local forests, parents who find creative solutions to divisive and seemingly irreconcilable school-redistricting issues, and a host of other citizen-led actions that are reinvigorating local democracy and decision making. Along with real-life examples of slow democracy in action, Clark and Teachout also provide twenty simple guidelines for communities and citizens to use as ways to reinvigorate their local democratic process. With a future more focused on local food, local energy, and local economies, *Slow Democracy* offers strategies to improve skills at local governance and to reinvigorate community democracy. Click [here](#) to order the book and [here](#) for more info. [See also these related,

recently-published books: [Democracy in Motion: Evaluating the Practice and Impact of Deliberative Civic Engagement](#); and [Bringing Citizen Voices to the Table: A Guide for Public Managers](#).]

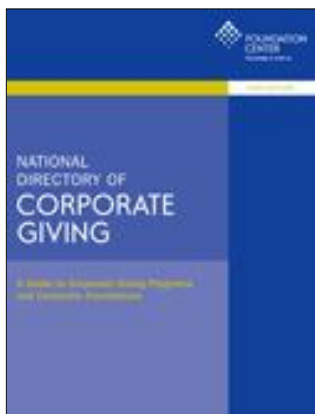


The North Atlantic coast of North America extends from Newfoundland and Labrador through the Maritime Provinces and the Northeastern U.S. south to Cape Hatteras. The maritime influence on climate, flora, and fauna for the region is dominant, even far inland. Both on land and at sea, this region is where north meets south, where the great northern boreal forests intermingle with the southern coniferous-hardwood forests, and where the icy Labrador Current and the tropical Gulf Stream vie for supremacy and eventually mix. **[The Atlantic Coast A Natural History](#)** draws upon the best and most up-to-date science on the ecology of the region as well as author [Harry Thurston](#)'s lifetime experience as a resident, biologist, and naturalist. The book explores the geological origins of the region, the two major forest realms, and the main freshwater and marine ecosystems, and describes the flora and fauna that characterize each habitat. It ends with a look at what has been lost and how the remaining natural heritage of the region might be conserved for the future. Click [here](#) and [here](#) to read reviews of the book.



[Cape Cod Bay](#) defines the character of the towns around it. It is the foundation for the sense of place and quality of life experienced by residents and visitors alike, yet it is fragile and easily threatened by human activity. The [Cape Cod Bay Monitoring Program](#)

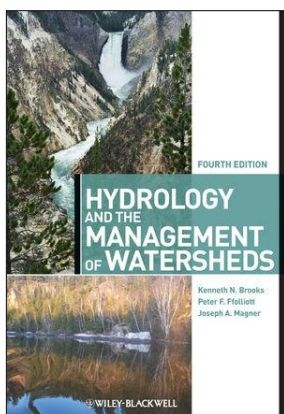
(CCBMP) at the [Provincetown Center for Coastal Studies](#) (PCCS), initiated in 2006, focuses on the health of Cape Cod Bay. It tracks changes in water quality and related indicators of ecosystem health. The findings of the CCBMP provide consistent, scientifically-sound, credible information that can be used as a tool for wise management decisions by communities and individuals that wish to move forward with the health and dynamics of the ecosystem in mind. The CCBMP's recently-released document, [How is Our Bay? Five Years of Environmental Monitoring of Cape Cod Bay](#), reports on these findings. Click [here](#) to download a copy of this report.



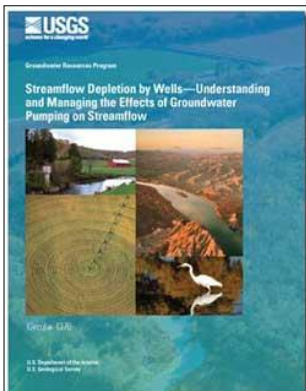
The 18th edition of the [National Directory of Corporate Giving](#), recently published by the [Foundation Center](#), provides comprehensive profiles of more than 3,300 company-sponsored foundations and nearly 1,700 corporate giving programs. The fully-indexed volume covers nearly 4,400 company profiles, include giving priorities, essential contact information, and web site links. Each profile includes a program descriptions, field(s) of interest, annual giving amounts, average size of grants awarded, giving limitations, key contact names, officers, donors, and trustees, and application procedures. [The Foundation Center also offers [free electronic newsletters](#) on various topics, including the weekly [Philanthropy News Digest](#) (PND) and the PND's [RFP Bulletin](#), a weekly roundup of recently announced Requests for Proposals (RFPs) from private, corporate, and government funding sources.]



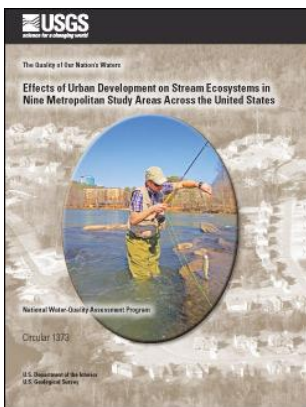
The recently-published handbook [From Sea to Source: International Guidance for the Restoration of Fish Migration Highways](#) shows best practice examples from different continents illustrating various ways for resolving fish migration problems. The guidance also deals with the need to restore habitats for the fish, as simply distributing fish in the river system might not, in itself, be sufficient. As the authors explain in the handbook, "It doesn't make any sense to open the door of the house if the house itself is not suitable to live in." The guidance is suitable for a wide range of people who are involved or interested in the topic of fish migration, including engineers, ecologists, policy makers and politicians. Click [here](#) to download the book for free (a 42 MB file) or for more info.



The newly-published Fourth Edition of [Hydrology and the Management of Watersheds](#), by [Kenneth N. Brooks](#), [Peter F. Ffolliott](#), [Joseph A. Wagner](#), is a major revision of this popular introductory reference on hydrology and watershed management principles, methods, and applications. The book's content and scope have been improved and condensed, with updated chapters on the management of forest, woodland, rangeland, agricultural, urban, and mixed land use watersheds. Case studies and examples throughout the book show practical ways to use web sites and the Internet to acquire data, update methods and models, and apply the latest technologies to issues of land and water use and climate variability and change. Click [here](#) to order the book and [here](#) for a free preview of selected sections of the book.

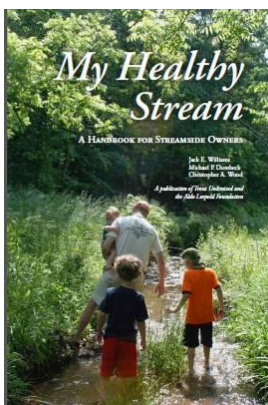


While groundwater is an important source of water for many human needs, including public supply, agriculture, and industry, groundwater pumping can have an adverse impact on streamflow, aquatic organisms and habitats. Groundwater and surface-water systems are connected, and groundwater discharge is often a substantial component of the total flow of a stream. Groundwater pumping reduces the amount of groundwater that flows to streams and, in some cases, can draw streamflow into the underlying groundwater system. Streamflow reductions (or depletions) caused by pumping have become an important water-resource management issue because of the negative impacts that reduced flows can have on aquatic ecosystems, the availability of surface water, and the quality and aesthetic value of streams and rivers. [**Streamflow Depletion by Wells—Understanding and Managing the Effects of Groundwater Pumping on Streamflow**](#), recently published by the U.S. Geological Survey and authored by Paul Barlow and Stanley Leake, describes the various field methods and modeling approaches that can be used to understand and manage streamflow depletion, as well as highlights several misconceptions concerning streamflow depletion and to explain why these misconceptions are incorrect. Click [here](#) to download the report or for more info.

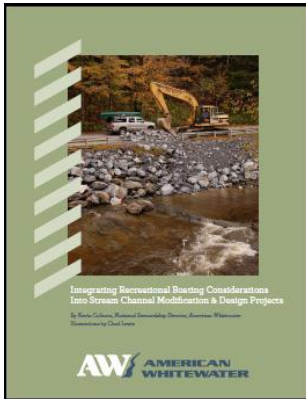


Contaminants, habitat destruction, and increasing streamflow flashiness resulting from urban development have been associated with the **disruption of biological communities, particularly the loss of sensitive aquatic species**. Every stream is connected downstream to larger water bodies, including rivers, reservoirs, and ultimately coastal waters. Inputs of chemical contaminants or sediments at any point along the stream can cause degradation downstream with adverse effects on biological communities and on economically valuable resources, such as fisheries and tourism. To better quantify these adverse impacts, the USGS's [National Water-Quality Assessment \(NAWQA\) Program](#) conducted a national-scale, scientific investigation of the effects of urban development on stream ecosystems. [Nine metropolitan study areas of the U.S. were selected](#) (including [Boston](#)) for a comprehensive investigation which focused on three broad questions of interest to decision makers: What are the primary effects of urban development on stream ecosystems?; How do the effects of urban development on stream ecosystems vary regionally across the country?; and Which urban-related stressors are most closely linked to

biological community degradation, and how can multiple stressors be managed to protect stream health as a watershed becomes increasingly urbanized? The findings were compiled into a recently-released report entitled [**Effects of Urban Development on Stream Ecosystems in Nine Metropolitan Study Areas Across the United States**](#). One of the report's major findings was that **the loss of sensitive species in streams begins to occur at the initial stages of urban development, and that streams are more sensitive to development than previously understood**. Click [here](#) to download the report, [here](#) to read the press release, [here](#) to read a recent blog posting on this report by American Rivers, and [here](#) to access the USGS's [**Effects of Urbanization on Stream Ecosystems**](#) web page for more info.

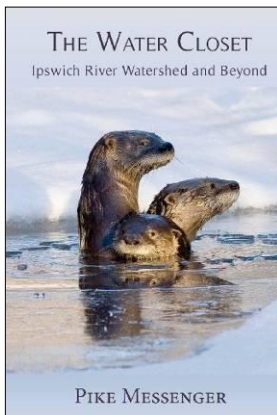


Produced in partnership by [Trout Unlimited](#) and the [Aldo Leopold Foundation](#), the recently-produced publication [**My Healthy Stream: A Handbook for Streamside Owners**](#) aims to provide people who own property bordering streams and rivers with information on caring for those waterways. The handbook includes chapters on understanding watersheds, stream monitoring, management options, flood control, invasive species, and more. Authors Jack Williams, Michael Dombeck, and Chris Wood have assembled a comprehensive, full color guide to understanding the ecological and other functions of streamside lands and promoting responsible decision-making regarding the usage and stewardship of those lands. Click [here](#) to order hard copies of *My Healthy Stream*, or click [here](#) for a free download of the book.

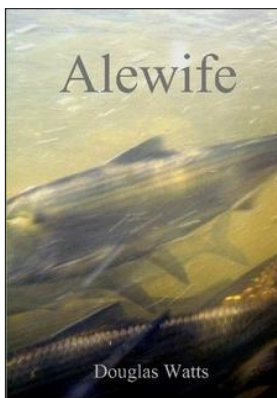


Stream channels are modified to meet a wide range of social and ecological goals. Many small-scale projects that involve adding wood and rock to rivers and their banks are aimed at improving fish habitat or protecting riparian property. Other projects are much larger in scale, such as those aimed at restoring a functional river channel in sites previously impacted by dams, mining, development, or other industrial-scale impacts. While most stream modification projects have well-defined primary ecological or engineering goals, (often secondary) recreational goals are seldom integrated into project design and implementation. **Integrating recreational goals and safety into projects can foster public support for projects, encourage recreational use and stewardship, and reduce the likelihood of avoidable accidents.** [*Integrating Recreational Boating Considerations Into Stream Channel Modification & Design Projects*](#), a paper put out earlier this year by [American Whitewater](#), aims to offer stream modification practitioners simple advice on how to create projects that meet their primary objectives while ensuring the projects are relatively low-risk and enjoyable for people descending the stream in canoes, kayaks,

and rafts. Click [here](#) to download this document or for more info.

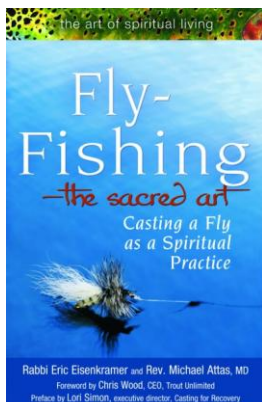


[*The Water Closet: Ipswich River Watershed and Beyond*](#), by Pike Messenger, is a rich and enjoyable assortment of his water-related essays written for a weekly column “The Water Closet” by the [Middleton Stream Team](#) and published from January 2006 through December 2011 in the [Tri-Town Transcript](#), a community paper serving the Ipswich River watershed towns of Middleton, Boxford and Topsfield. The Middleton Stream Team is an active volunteer group with the broad purposes of environmental stewardship, conservation, advocacy, public service and education. The essays and information provided span all these purposes. *The Water Closet* can be purchased for \$20 at the [Ipswich River Watershed Association](#)’s headquarters at 143 County Road in Ipswich. A portion of the proceeds supports protection of the Ipswich River and surrounding lands.



The newly-published book [*Alewife*](#), authored by [Doug Watts](#), is a personal, biological and historical account of the alewife (*Alosa pseudoharengus*), one of the (formerly) most abundant sea-run fish of the U.S. Atlantic seaboard. *Alewife* tells the story of the once ubiquitous species, currently dramatically reduced in number, due in large part to human causes; and the 400-year history of many long forgotten people who labored mightily to bring the alewife back. It tells the story of the fish through its own eyes and life, apart from what it “can do for us”. *Alewife* recounts the fight for, against, and over a diminutive but once extremely abundant fish that still continues today in state and federal court rooms. A section of the book is devoted to meticulous transcriptions of historic records describing the species and its use and abuse by humans in New England from the 1600s to the present. The remainder of the book tells, in a personal essay style, the story of the alewife,

based mostly on recent efforts in New England to protect and save them. Click [here](#) to order the book and [here](#) for more info on the book and its author. [Click [here](#) to read a similarly-themed article appearing in [Natural History](#) magazine, written by [Maine Rivers](#) board member [Bill Townshend](#).]



In the recently-published book, [*Fly Fishing--The Sacred Art: Casting a Fly as a Spiritual Practice*](#), authors [Rabbi Eric Eisenkramer](#) (who maintains a [Fly Fishing Rabbi](#) blog) and Reverend Michael Attas, an Episcopal priest, share what fly-fishing has to teach us about reflection, awe and the wonder of the natural world, the benefits of solitude, the blessing of community and the search for the Divine. Tapping the wisdom in the Christian and Jewish traditions and their own geographically diverse experiences on the water, they show how time spent on the stream can help you navigate the currents and eddies of your own inner journey. With charm, wit and passion, they delve into topics such as: escaping the Everyday; fly-casting and finding your Place in Nature; Mindfulness during and after your trip; fly-fishing community and sharing common ground; insightful surprises in unfamiliar terrain; expanding and expressing your creativity through fly-tying; and tapping your inner Stewart

[ame](#) radio program.

A banner image for the Commonwealth Conversations blog. It features a landscape with a rainbow arching over a field of green grass and several large hay bales. The sky is dark and cloudy, suggesting a recent rain. The text "Commonwealth Conversations" is written in a large, bold, serif font at the top, and "The Great Outdoors" is written in a smaller, italicized serif font below it.



Green Massachusetts

Tim Purinton, *Director*
 Hunt Durey, *Acting Deputy Director*
 Carrie Banks, *Stream Team and Westfield River Wild and Scenic Committee Coordinator*
 Jeremy Bell, *Wetland Restoration Specialist*
 Russell Cohen, *Rivers Advocate*
 Michelle Craddock, *Flow Restoration Specialist*
 Cindy Delpapa, *Stream Ecologist*
 Eileen Goldberg, *Assistant Director*
 Alex Hackman, *Project Manager*
 Franz Ingelfinger, *Restoration Ecologist*
 Georgeann Keer, *Wetland Scientist and Project Manager*
 Beth Lambert, *River Restoration Scientist*
 Chris Leuchtenburg, *River Restoration Data Researcher*
 Laila Parker, *Watershed Ecologist*
 Nick Wildman, *Priority Projects Coordinator*

Division of Ecological Restoration (DER)
251 Causeway St. Suite 400
Boston, MA 02114
(617) 626-1540

